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OFFICE OF NATIONAL RECOVERY ADMINISTRATION

DIVISION OF REVIEW

FOREIGN TRADE UNDER THE NATIONAL INDUSTRIAL RECOVERY ACT

By

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WORK MATERIALS NO. 37

IN TWO VOLUMES

VOLUME II: APPENDIX TO PART B

FOREIGN TRADE STUDIES SECTION
March, 1936

FOREIGN TRADE UNDER THE NATIONAL INDUSTRIAL RECOVERY ACT

APPENDIX TO PART B.

SECTION 3 (e) OF THE NATIONAL INDUSTRIAL RECOVERY ACT, AND ITS ADMINISTRATION

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FOREIGN TRADE UNDER THE
NATIONAL INDUSTRIAL RECOVERY ACT

APPENDIX TO PART B. SECTION 3 (e) OF THE NATIONAL INDUSTRIAL RECOVERY ACT, AND ITS ADMINISTRATION

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*The United States Tariff Commission has published the results of its investigations of the complaints with respect to these cases.

**A report on conditions and problems of the cotton textile industry by a Cabinet Committee appointed by the President of the United States was published as Senate Document 126, Seventy-fourth Congress, First Session.

***The United States Tariff Commission has published a report on a recent investigation of Wool Knit Gloves under Section 336 of the Tariff Act of 1930.

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BINDER TWINE (No. 47)

SURVEY OF INFORMATION

ON

BINDER TWINE

September, 1935

Subject of Complaint and Status of the Complainants under the National Industrial Recovery Act

This is a report on a complaint filed by ten domestic manufacturers of binder twine, pursuant to Section 3(e) of the National Industrial Recovery Act, with respect to imports of binder twine of all kinds.

The complainant producers operated under the Code of Fair Competition for the Cordage and Twine Industry (Code No. 303), approved on February 21, 1934. These companies manufacture about 45 per cent of all binder twine produced in this country by private manufacturers and about 30 per cent of all binder twine produced in the United States by both the private manufacturers and eight State prisons.

The largest private manufacturer of binder twine, producing about 35 per cent of both privately manufactured and prison-made binder twine, the State prisons, and four very small producers of binder twine did not become parties to the complaint.

Cooperation by Other Producers

All the private companies, especially the leading producer, and the prisons as well cooperated in furnishing information with respect to the domestic production of binder twine at the request of the National Recovery Administration. Cooperation with the prisons manufacturing binder twine, with exception of the Kansas State prison, was obtained through the efforts of the Prison Labor Authority created under the Compact of Fair Competition for the Prison Industries of the United States, approved by the President on April 19, 1934. The 28 signatory States under the compact undertook to establish and maintain fair competition between products of private domestic industry and those of prison industry.

Commodity and Tariff Treatment

Description of commodity

Binder or binding twine is a single-ply, hard-twisted yarn, with a breaking strength of 65 pounds, which is manufactured from hard fiber to measure by weight approximately 500 feet to 650 feet in length per pound, the better grades of twine being of proportionately longer measure.

Binder twine is used extensively in this country for the harvesting of grain crops.

In 1880 the first hard-fiber binder twine was successfully manufactured from pure abaca fiber (manila hemp) grown in the Philippines. Abaca has since been used in the manufacture of binder twine, although it has largely been displaced by Mexican and Cuban henequen and to a less extent by sisal from East Africa, the Netherland East Indies, and Haiti. Relatively small amounts of istle, sunn, and New Zealand hemp have been used from time to time in the manufacture of binder twine.

Binder twine is gill-spun by machinery directly from the sliver of the various hard fibers. The twine is oiled when spun. After spinning, it is wound in balls weighing five or eight pounds, which are packed in 50-pound burlap-covered bales.

Tariff treatment

Paragraph 1622 of the Tariff Act of 1930 provides that binder twine "manufactured from New Zealand hemp, henequen, manila, istle or Tampico fiber, sisal grass, or sunn, or a mixture of any two or more of them, of single ply and measuring not exceeding 750 feet to the pound" is free of duty. Binder twine was duty-free under the Tariff Acts of 1922 and 1913.

Henequen and sisal twines have been held to be not free of duty as binding twine under Paragraph 1521 of the Act of 1922 unless they are single-ply, hard-twisted, oiled yarns measuring approximately not less than 500 feet and not more than 750 feet to the pound and wound in balls of five or eight pounds in weight (T.D. 40805). The Treasury Department has ruled that binder twine measuring 475 feet to the pound should be admitted free of duty provided other conditions prescribed in Treasury Decision 40805 are met. (C.I.E. 1527 of 1928)

The Raw Material

Domestic and imported binder twine is chiefly made from henequen, sisal, and abaca (manila hemp), the amount of each used in the manufacture of binder twine during any given period depending largely upon the relative prices for the individual fibers. It is believed that henequen is usually the chief component fiber of the two principal grades of domestic binder twine which are known in the trade as 500-foot Standard and 500-foot White Sisal, and which account for about 85 per cent of total domestic production of all binder twine. The better grades of twine, those of 600 feet and 650 feet to the pounds, contain only abaca, or abaca mixed with sisal and/or henequen.

Sisal and henequen fibers

Sisal and henequen fibers are obtained from the leaves of two closely related but distinct species of the genue Agave. Both species

originated in the Yucatan peninsula, and they are not known elsewhere except as introduced plants. Both are cultivated on large plantations in the Tropics, and the fibers are cleaned by means of the same type of machines. Both fibers are used in the manufacture of ropes of small diameter and hard-fiber twines other than binder twine.

(a) Sisal. - The sisal plant, Agave sisalana, is now regularly cultivated on large plantations in Kenya Colony, Tanganyika, Portuguese East Africa, Senegal, Dahomey, Sumatra, Java, India, and Haiti. The most extensive production is in tropical East Africa and Sumatra and Java. Cultivation in many areas was not greatly developed prior to the World War.

(b) Henequen. - The henequen plant, Agave fourcroydes, is cultivated in Yucatan and Campeche, and to a less extent in the States of Chiapas, Tamaulipas, and Sinaloa in Mexico, and in Cuba.

The principal production of the fiber is in Yucatan where the total output is marketed under the direction of Los Henequeneros de Yucatan Sociedad Cooperativa. The Cooperativa determines the price of the fiber to foreign purchasers from time to time, and occasionally restricts the output. A reduction in fiber output of 20 per cent of production in 1929 was enforced from 1930 to June 30, 1933, inclusive, by the Yucatan Cooperativa to meet falling prices occasioned by growing stocks and declining world consumption of hard fibers. On March 4, 1933, the Governor of Yucatan levied a production tax on the fiber, which will increase progressively with the market price of the fiber from 4 to 10 centavos per kilogram, and a processing tax of 0.52 centavos on every kilogram of fiber "industrialized" in the States.

(c) Production. - Before 1910 the world was dependent upon Mexico for its supply of agave fibers. Since that time henequen plantations have come into production in Cuba and sisal plantations elsewhere. The result has been an increasing production of sisal and henequen fibers, as may be noted from Table 1.

Table 1. - World production of agave fibers, 1909-1930

Period	Sisal	Henequen
	Metric tons	
1909-1913 (5-year average)	26,700	106,800
1926	76,700	117,000
1927	94,100	175,000
1928	98,100	113,700
1929	122,100	104,000
1930	135,940	112,200

Source: Dept. of Agriculture, Circular No. 186, October, 1931, Sisal and Henequen, Plants Yielding Fiber

for Binder Twine; estimates for 1930 furnished by the Department to replace those given in the circular.

Abaca

Binder twine was first manufactured almost exclusively from abaca which for many years came entirely from the Philippine Islands. The Philippines remain the principal source of abaca, although in recent years the production of this fiber in the Netherland East Indies has developed. Abaca is widely used in the United States for the manufacture of cordage, rope, and marine cable.

World production of the agave fibers and abaca since 1930

Production of the agave fibers, as well as abaca, has increased since 1930. This increase may partly account for the decline in price of raw fibers since 1929. Production by principal countries and producing regions is shown in the table below.

Table 2. - Hard fiber: Estimated world production, by countries, of abaca, sisal, and henequen, 1930-1934

(Long tons)

Fiber and producing area	1930	1931	1932	1933	1934
Abaca					
Philippine Islands	159,440	133,850	110,230	151,000	172,240
Netherland East Indies	10,000	10,000	10,000	10,000	5,000
Total	169,440	143,850	120,230	161,000	177,240
Sisal					
East Africa 1/	76,000	83,000	85,000	102,000	111,000
West Africa 2/			6,000	6,000	10,000
Netherland East Indies	55,000	66,000	70,000	85,000	80,000
West Indies 3/	4,600	6,350	6,000	6,000	10,000
Haiti	2,520	2,900	3,300	3,800	4,290
Total	138,120	158,250	170,300	202,800	215,290
Henequen					
Mexico	104,000	70,000	88,000	93,000	92,000
Cuba	10,000	10,000	9,820	11,000	10,000
Total	114,000	80,000	97,820	104,000	102,000
Total sisal and henequen	252,120	238,250	268,120	306,800	317,290

Source: Dept. of Agriculture, Bureau of Plant Industry. The estimates provided by the Dept. of Agriculture are based on data obtained from the Philippine Fiber Inspection Service, Wigglesworth & Co., Ltd.,

London, and consular reports.
1/ Includes Tanganyika, Kenya Colony, and Portuguese East Africa.
2/ Principally Senegal and Dahomey.
3/ Principally British West Indies and Jamaica; some production in Salvador may be included.

NOTE: World production of bowstring hemp, maguey, and Mauritius hemp, not shown in this tabulation, amounts to about 12,000 tons annually.

Tariff treatment

Sisal, henequen, abaca are imported free of duty, under Paragraph 1684 of the Tariff Act of 1930. They were duty-free under the Tariff Acts of 1922 and 1913.

Imports

Imports of sisal and henequen and the unit value of imports since 1927 by principal countries of shipment are shown in Table 3. Imports of the raw fiber from the Netherlands, Germany, and the United Kingdom are believed largely to represent shipments from the plantations of Africa and the Netherland East Indies that were transshipped to the United States.

In Table 3 it will be noted that the unit value of all sisal and henequen imports declined from 7.0 cents a pound in 1929 to 2.2 cents a pound in 1932, when the unit values for fiber from all sources reached their lowest level in history. In 1933 the unit value of all imports rose only three-tenths of 1 cent. During 1932 imports of sisal and henequen, amounting to 168,205 long tons, were greater than in any year of the 1927 to 1934 period, and in 1933 total imports of 136,268 long tons exceeded the imports of 1927, 1930, 1931, and 1934.

Domestic Consumption

Channels of trade

Binder twine is sold to consuming farmers by farm implement dealers, general retail stores, supply houses, and farm cooperative buying groups.

Only about 20 per cent of the binder twine manufactured by the State prisons is sold outside the State of manufacture. In 1934 none of the binder twine made in the prisons of Wisconsin and North Dakota was sold outside these States. About 68 per cent of prison-made binder twine is sold direct to retailers, 18 per cent to wholesalers and jobbers, 6 per cent to farm cooperatives, and 10 per cent through other channels including direct purchases by farmers.

Uses of binder twine

In different areas of the country binder twine is used for harvesting a number of grains, although its greatest use is to be

Table 3. Sisal and Henequen Fiber: Imports for Consumption Into The United States, By Countries, 1927 to 1934

	1927	1928	1929	1930	1931	1932	1933	1934
				Quantity in Long Tons				
Total	118,829	134,616	134,683	85,661	89,300	168,205	126,268	78,082
Mexico	91,033	96,685	85,340	40,346	41,054	118,172	73,158	41,672
Cuba	1,859	1,800	2,809	3,931	3,665	1,769	3,890	1,898
Netherland East Indies	17,028	17,680	26,922	24,854	21,892	31,024	34,109	22,814
Netherlands	245	3,240	2,258	3,065	4,414	2,138	-	-
British East Africa	1,095	6,074	7,787	4,963	-	8,285	10,248	5,391
United Kingdom	120	1,198	1,367	1,582	12,313	2,192	82	118
Germany	18	2,316	3,813	3,661	1,262	476	-	256
Haiti	8	8	67	364	27	2,974	3,639	5,069
All Other	7,423	5,615	4,320	2,839	4,673	1,175	1,142	864
				Value				
Total	$ 18,218,863	19,533,119	21,088,159	11,864,272	7,450,999	8,427,094	7,183,890	5,536,584
Mexico	13,072,474	12,949,655	12,082,668	4,540,603	3,427,801	5,656,607	3,953,862	2,609,604
Cuba	256,318	249,577	420,687	516,310	314,560	84,889	211,566	129,811
Netherland East Indies	3,376,018	3,149,165	5,020,034	4,154,408	1,864,320	1,698,441	2,136,005	1,889,016
Netherlands	47,591	622,317	435,487	485,042	350,330	136,609	-	-
British East Africa	168,109	1,036,780	1,446,787	897,076	-	449,450	504,674	414,593
United Kingdom	24,504	218,746	269,192	230,190	986,781	140,180	6,725	7,608
Germany	3,734	373,985	708,520	558,579	82,651	26,340	-	19,160
Haiti	1,377	1,325	9,860	47,169	1,935	167,739	230,528	402,236
All Other	1,268,738	931,569	694,924	434,895	422,621	66,839	80,530	64,556
				Value per Pound				
Total	$ 0.068	0.065	0.070	0.062	0.037	0.022	0.025	0.032
Mexico	.064	.060	.063	.050	.037	.021	.024	.028
Cuba	.062	.062	.067	.058	.038	.021	.024	.031
Netherland East Indies	.089	.080	.083	.075	.039	.024	.028	.037
Netherlands	.088	.086	.086	.071	.035	.029	-	-
British East Africa	.069	.076	.083	.081	-	.024	.025	.034
United Kingdom	.091	.084	.088	.065	.036	.029	.037	.029
Germany	.093	.072	.083	.068	.029	.025	-	.033
Haiti	.077	.074	.066	.058	.032	.025	.028	.035
All Other	.076	.074	.072	.068	.040	.025	.031	.033

Source: Commerce and Navigation.

found in the wheat, barley, oats, rye, and rice growing regions. Binder twine is used for harvesting sorghum grains and buckwheat, as well as flax and grass-seed crops. No binder twine is used for harvesting corn in the corn-belt area where corn is picked in the field from the standing stalks, but in such eastern States as Ohio, Virginia, Maryland, Pennsylvania, and Delaware, it is employed where the stalks are cut and the corn is harvested from the shock. Much corn for silage is first cut and bound with a binder.

Consumption per acre

The amount of twine used in any area depends upon the methods of harvesting, the stand of grain or corn acre, and the relative amount of grain straw, the latter being related to rainfall during the growing season. Under usual crop conditions, about 2.5 pounds of twine are used for harvesting an acre of wheat, 2.3 pounds for oats and barley, 2.8 pounds for rye, 5 pounds for rice, and 3 pounds for an acre of flax. For shocking corn about 2.2 pounds per acre are required, and for bundling corn for silage about 3.4 pounds are required. To a limited extent the growing practice of cutting corn ensilage in the field has reduced the consumption of binder twine.

Decreased twine consumption

The consumption of binder twine since 1920 has declined partly as a result of the increasing use of the combined harvester-thresher, especially in the Great Plains area. Approximately 3 million acres of wheat, oats, barley, and rye were harvested by the combine in 1920. In 1932 the acreage of these grains harvested by the combine reached 25 million. The use of the combine spread from the Pacific Coast to the dry areas of Oklahoma, Kansas, and Texas in 1918, and then to almost every State east to the Atlantic and north into Canada. An example of its spread is seen in North Dakota where three combines were reported in 1925, 27 in 1926, 249 in 1927, and 1,172 in 1928.

Drought conditions and crop restriction in 1933 and 1934 also accounted for a decrease in binder-twine consumption. As compared with 1932, when approximately 112.9 million acres of wheat, oats, barley, and rye were harvested, there were harvested only 96.4 million acres in 1933 and 81.7 million acres in 1934, as may be seen from Table 4. With this reduction in acreage correlated with the acreage of these four grains harvested with the combine, the total acreage of wheat, oats, barley, and rye for which twine was used in harvesting amounted to 87.9 million in 1931, as compared with 76.4 million in 1933 and 64.7 million in 1934.

With an increased acreage of all these grains estimated for the season of 1935, according to the Department of Agriculture, including a liberal estimate for the total acreage which will be harvested by combines, a total of about 78 million acreas requiring twine is anticipated in 1935. This increase is expected to require a total of about 195 million pounds of binder twine for the harvesting of wheat, oats, barley, and rye during 1935, as compared with about 136 million pounds in 1934, and 168.1 million in 1933, as shown in Table 4. This table also shows the average price per pound of twine and the total cost of twine to the farmers.

Table 4. - Domestic consumption of binder twine for harvesting wheat, oats, barley, and rye, in relation to total acreage and the use of the combine harvester, and the price per pound and the total cost of twine used, 1919-1935.

Year	Acreage: Of specified crops	Acreage: Harvested by combine	Acreage: Using twine	Binder twine: Amount per acre	Binder twine: Total used	Binder twine: Price per pound to farmers	Binder twine: Total cost to farmers
	Millions of acres			Pounds	Million pounds		Million dollars
1919	129.0	3	126.0	2.40	302.4	$0.258	$78.0
1920	116.1	3	113.1	2.70	305.4	.200	61.1
1921	121.1	3	118.1	2.25	265.7	.160	42.5
1922	116.0	4	112.0	2.45	274.4	.130	35.7
1923	111.9	4	107.9	2.50	269.8	.134	36.2
1924	105.1	4	101.1	2.75	278.0	.138	38.4
1925	108.4	6	102.4	2.55	261.1	.153	39.9
1926	110.4	8	102.4	2.40	245.8	.160	39.3
1927	111.9	12	99.9	2.40	239.8	.152	36.4
1928	114.3	17	97.3	2.60	253.0	.142	35.9
1929	117.4	22	95.4	2.50	238.5	.142	33.9
1930	116.9	24	92.9	2.60	241.5	.144	34.8
1931	109.6	25	84.6	2.45	207.3	.122	25.3
1932	112.9	25	87.9	2.50	219.8	.088	19.3
1933 1/	96.4	20	76.4	2.20	168.1	.081	13.6
1934 1/	81.7	17	64.7	2.10	136.0	.096	13.1
1935 2/	3/102.8	25	78.0	2.50	195.0	4/ .086	16.8

Source: Dept. of Agriculture, Bureau of Agricultural Economics.

1/ Subject to possible revision.

2/ Estimated by Bureau of Agricultural Economics, May 15, 1935, on the basis of the acreage of winter grains remaining for harvest and intentions to plant spring grains, along with an average twine consumption of 2.5 pounds per acre.

3/ The estimated acreage of the four grains for the 1935 harvest, over 1934, is as follows: Winter and spring wheat, 48.3 million in 1935 and 42.2 million in 1934; oats, 39.1 million in 1935 and 30 million in 1934; barley, 11.9 million in 1935 and 7.0 million in 1934; rye, 3.5 million in 1935 and 2 million in 1934.

4/ Estimated as being 20 per cent greater than the wholesale price of 500-foot white sisal and standard binder twine set for the 1935 season on April 18, 1935. (The wholesale price of this grade of twine ranged from 74 to 81 per cent of the price to the farmer in the years 1931-1934.)

The Domestic Industry

Domestic binder twine is produced by 15 different companies in 16 mills situated in Massachusetts, New York, Pennsylvania, New Jersey, Ohio, Illinois, Missouri, Louisiana, Texas, and California, and by 8 State prisons in the grain growing regions of the West. The heaviest production by private manufacturers is in Massachusetts, New York, Ohio, Illinois, and Louisiana.

The private industry

In 1929 there were about 17 mills in which binder twine was produced, including three manufacturing only binder twine. In 1934 there were 16 mills, two producing binder twine exclusively. A total of approximately 1,457 wage earners was employed in the production of binder twine in 1929 at a payroll for the year of about $1,475,000; about 1,200 wage earners were employed in 1934 at a payroll for the year of roughly $953,000.

During the period May, 1929, to May, 1932, mills producing binder twine at North Kansas City, Mo., St. Paul, Minn., and Portland, Oreg., were closed. The St. Paul mill, producing only binder twine, prior to its closing had a relatively large annual output, while the production of the two other mills which were closed was comparable with the annual output of some of the medium-sized cordage mills in the country.

Between 1929 and the second quarter of 1932, however, two very small cordage mills commenced the production of binder twine, one at New Orleans and the other at Houston, Texas. Moreover, a former manufacturer of binder twine, not a party to this complaint, although producing no binder twine in 1929 and 1930, began again the manufacture of binder twine in 1931 and increased yearly production thereafter.

(a) Concentration of production. - There is a high degree of concentration of production in the binder twine industry. The two largest producers since 1929 have accounted for about 75 per cent of total output; four small-to-medium-size companies have produced about 23 per cent of the total, while some eight to ten very small remaining producers have accounted for about 2 per cent of the total production of binder twine.

(b) Branch factories and fiber plantations. - There are five fiber mills abroad operated in connection with branch factories controlled by the two leading domestic producers, including single mills in Sweden (established in 1905), France (1906), Germany (1908), and two in Canada (1902 and 1905).

These same domestic producers own and operate abroad three fiber plantations, two of which are situated in Cuba, and one in Davao province in the Philippine Islands. The two Cuban plantations, together valued at $1,300,000, are devoted to the culture of henequen. The Philippines plantation, although not yet in bearing, is for the production of abaca.

(c) The importance of binder twine to the domestic producers. - With the exception of its production by one large producer engaged primarily in the manufacture of farm machinery, binder twine is manufactured by producers of yarn, rope, oakum, and twines other than binder twine, - all made principally from hard fibers. With respect to the ten complainant manufacturers - all cordage producers, - binder twine accounted for about 43 per cent of the total value of all commodities produced by these companies in 1931, 52 per cent in 1932, and 42 per cent in 1933, and 39 per cent during the first nine months of 1934. The binder-twine production of four of the five largest complainant producers (the four classified above as small-to-medium in size) amounted to 56 per cent of the total factory value of all fiber products manufactured by them between 1931 and September, 1934. With respect to each of these four producers, the value of binder-twine production in relation to the value of total production of all commodities ranged from 30 per cent to 75 per cent. Binder-twine production is relatively less important to the five other complainants, designated as very small. For four of these producers operating throughout the period 1931 to September, 1934, binder twine amounted to only 6 per cent of the total value of all products which they manufactured, and was of greater relative importance (38 per cent) to only one producer. In relation to total production since 1932 by all five of the very small complainant producers, binder twine accounted only for 8 per cent of the value of all products which they manufactured.

The date of the following table indicate the importance of binder twine as a cordage product of private industry in the United States since 1927. In 1929 binder twine amounted to 33 per cent in quantity and 18 per cent in value of all cordage and twine products privately manufactured, as compared with 35 per cent in quantity and 16 per cent in value in 1933.

Table 5 - Binder twine: Relation of total output to the production by private industry of all cordage products in the United States. 1927 to 1933.

Item	1927		1929		1931		1933	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	Pounds		Pounds		Pounds		Pounds	
Rope, Cable, Cordage	232,651,263	$44,642,019	227,686,988	$42,671,292	116,697,107	$17,093,450	111,644,089	$15,237,716
Other twine	138,273,574	32,972,645	177,079,357	44,194,756	136,441,210	20,896,441	149,139,770	21,198,686
Binder twine	169,795,238	19,456,818	178,605,138	18,394,946	134,255,586	11,457,701	142,614,047	6,990,700
Total	540,720,075	$97,071,482	583,371,483	$105,260,994	387,393,903	$49,447,592	403,397,906	$43,427,102
Ratio of binder twine to total (per cent)	31.40	20.04	32.66	17.48	34.66	23.17	35.35	16.10

Source: Census of Manufactures.

The State prison binder twine industry

For many years the manufacture for sale to the public of binder twine by some eight or nine State prisons has constituted an important prison industry and has represented a substantial proportion of total domestic production. Binder twine is not produced in the Federal prisons.

(a) Importance of binder twine manufacture as a prison industry. - Prison binder-twine production came at the insistence of farmers in the wheat-raising communities of the West, after the National Cordage Co., established in 1887, and its predecessors, the United States Cordage Co. (1894 to 1895), the Standard Rope & Twine Co. (1895 to 1905), and the Standard Cordage Co. (1906 to 1910), tried through "trust" organizations to monopolize completely the cordage and twine industry in the United States by attempting to control not only the marketing of manila hemp (abaca) and Mexican sisal (henequen), but also the manufacture of cordage machinery.

The first State prison binder-twine mill was established by Minnesota in 1891. The Minnesota prison plant soon became self-supporting and a source of revenue to the State. Its success led other States to establish prison plants, including; Kansas in 1898, North Dakota in 1900, Missouri in 1905, Indiana in 1906, Michigan in 1908, and in South Dakota in 1909. The first appropriation for a prison binder-twine factory was made in Wisconsin in 1907 and in Oklahoma in 1916. None of the other prison plants has been so financially successful as the one in Minnesota. Some have been operated at continuing losses.

The manufacture of binder twine is an important prison industry. Of all prison goods and farm products produced in 47 States in 1923 for the competitive market under the public account, piece-price, and contract systems, binder twine accounted for approximately $5,550,000 of a total value of $44,826,622, or 12 per cent. In 1932, binder twine accounted for 14 per cent of the value of State prison manufactures and farm produce entering the competitive market, or $4,050,123 of a total $28,894,629. A total of 1,366 inmates was engaged full or part time in the production of binder twine in 1923, and 1,672 in 1932.

(b) Production by prisons. - Among the States in which prisons produce binder twine, Minnesota, the most important, accounted for 46 per cent of the total in 1934, and was followed by Wisconsin and Michigan. Table 3 shows the production of prison binder twine by States in 1923 and in 1932 and 1934 for both State use and State account. Binder twine produced for State use is almost negligible, amounting to less than 1 per cent of the total.

TABLE

BINDER TWINE

Prison production for state use and state account
in 1923, 1932, and 1934

State prison, penitentiary, or reformatory	1923		1932		1934		Ratio to total Quantity		
	Quantity	Value	Quantity	Value	Quantity	Value1/	1923	1932	1934
	Pounds		Pounds		Pounds		Per cent		
Indiana	4,374,425	$ 345,183	-	-	-	-	7.10	-	-
Kansas	3,626,500	290,120	3,202,938	$ 198,377	1,500,000 2/	$ 105,000	5.69	5.03	3.00
Michigan	16,922,915	1,507,421	12,125,690	763,918	5,157,450	356,059	27.46	19.03	10.31
Minnesota	23,667,885	2,240,345	26,655,300	1,672,507	22,772,150	1,594,040	38.41	41.84	45.54
Missouri	170,356	19,677	2,304,695	126,758	2,166,623	134,335	.28	3.62	4.33
North Dakota	3,707,350	341,973	4,160,050	335,972	4,898,900	341,523	6.02	6.53	9.80
Oklahoma	2,150,575	192,873	1,700,402	70,754	1,526,250	90,308	3.49	2.67	3.05
South Dakota	2,083,077	209,123	6,098,600	410,424	3,237,700	336,000	3.38	9.57	6.48
Wisconsin	4,912,600	441,657	7,464,000	473,276	8,743,250	612,028	7.97	11.71	17.49
	61,615,683	5,586,372	63,711,675	4,051,986	50,002,323	3,569,293	100.00	100.00	100.00

1/ Estimated. The standard price for prison binder twine approved by the Prison Labor Authority in 1934 was 7 cents per pound.

2/ Estimated.

Sources: Bureau of Labor Statistics, Bulletin No. 372, Convict Labor in 1923 (1925), and Bulletin No. 595. Prison Labor in the United States, 1932 (August, 1933);
National Recovery Administration, Prison Industries Questionnaire (1934); Prison Labor Authority Questionnaire (1935).

Domestic Production

Table 7 shows the total yearly production of all grades of binder twine in the United States since 1923. Complete data are not available on the production by the private manufacturers and the prisons of the different grades of binder twine, i.e., 500-foot Standard, 600-foot Manila, etc. Data furnished the National Recovery Administration indicate, however, that from 88 to 92 per cent of all binder twine produced between 1929 and 1934 was 500-foot Standard and 500-foot White Sisal twine.

Table 7. - Binder twine: Production by all private companies and the prisons, and relation of prison to total domestic production

Year	Total domestic production (private and prison)	Production by private companies	Prison production	Ratio of prison to total domestic production	Index of total production
	Pounds			Per Cent	1923 = 100
1923	295,367,912	1/239,800,117	55,567,795	18.81	100.00
1925	289,959,1[illegible]	1/233,660,642	56,298,552	19.42	98.17
1927	227,603,692	1/169,795,238	57,808,454	25.40	77.06
1929	232,071,195	2/184,749,645	47,322,550	20.39	78.57
1931	190,214,064	2/138,052,864	52,161,200	27.42	64.40
1932	222,887,517	2/159,175,842	63,711,675	28.58	75.46
1933	198,466,996	2/141,331,259	57,135,737	28.79	67.19
1934	150,357,420	2/100,355,097	50,002,323	33.26	51.24

1/ Census of Manufactures.
2/ Total based on Data submitted to the National Recovery Administration

From the data in the foregoing table it will be noted that total domestic production of binder twine in 1934 was slightly more than half of the output in 1923, production in 1934 amounting to 150,357,000 pounds as compared with 295,368,000 pounds in 1923. Prison production did not decline during the period 1923 to 1934 nearly as greatly as production by the private manufacturers, as is indicated by the increasing ratio of prison production to total production. Prison-made binder twine accounted for 19 per cent of total domestic production of binder twine in 1923 and 33 per cent in 1934. There are 55,568,000 pounds of binder twine produced in the prisons in 1923 and 50,990,000 in 1934.

Table 8 shows the production of binder twine since 1929 by the ten complainant producers, in prisons, and other private manufacturers in relation to total production. It will be noted that while the ratio of production by the ten complainant producers to total production declined only one point from 1929 to 1934, the ratio of pro-

duction by other private manufacturers in relation to total production declined 12 points, and that of the prisons increased 13 points.

Table 8. - Binder twine: Domestic production by complainant companies, other manufacturers, and prisons, 1929-1934

Period	Total	Complainant	Prison	Other	Ratio to total: Complainant	Ratio to total: Prison	Ratio to total: Other
	Pounds				Per cent		
1929	232,072,195	74,067,629	47,322,550	110,682,016	31.92	20.39	47.69
1931	190,214,064	67,671,825	52,161,200	70,381,039	35.58	27.42	37.00
1932	222,887,517	79,120,940	63,711,675	80,054,902	35.50	28.58	35.92
1933	198,466,996	64,618,382	57,135,737	76,712,877	32.56	28.79	38.65
1934	150,357,420	46,524,644	50,002,323	53,830,453	30.94	33.26	35.80
1935							
(Jan.-Feb.)	23,190,233	5,834,000	1/9,816,233	7,540,000	25.16	42.33	32.51
(Jan.-Mar.)	-	-	10,224,350	-	-	-	-

Source: Census of Manufactures and data submitted to the National Recovery Administration and the Prison Labor Authority.

1/ Estimated

Total production of binder twine and production by the ten complainant producers, the prisons, and other private manufacturers, given in the foregoing table, are expressed in terms of indices of 1929 in Table 9.

Table 9. - Binder twine: Indices showing trend of domestic production since 1929

(1929 = 100)

Period	Total	Complainant	Prison	Other
1929	100.00	100.00	100.00	100.00
1931	81.96	91.36	110.22	63.59
1932	96.04	106.82	134.63	72.33
1933	85.52	87.24	120.74	69.31
1934	64.79	62.81	105.66	48.63

Carry-over

Unsold binder twine carried over from one season to the next by the prisons and by the private manufacturers has increased since 1931. It is estimated that the combined carry-over of the prisons and the private manufacturers amounted to 55 million pounds in 1932, 91 million pounds in 1933, and 124 million pounds in 1934, an increase in 1934 over 1932 of 69 million pounds, or 125 per cent. Carry-over of the private producers has increased at a greater rate than carry-over of the prisons and in greater increasing ratio to production.

Total carry-over on October 1 of all the private manufacturers in the country, not including the carry-over of one of the medium-sized complainant producers, amounted to 42,117,970 pounds in 1931, 40,966,238 pounds in 1932, 74,463,347 pounds in 1933, and 94,007,738 pounds in 1934, an increase from 1931 to 1934 of 51,889,768 pounds, or 123 per cent, and an increase from 1932 to 1934 of 53,041,500 pounds, or 129 per cent.

Total carry-over as of December 1 of six of the eight prisons producing binder twine, including the carry-over of the three largest producing prisons, amounted to 11,781,393 pounds in 1932, 11,169,376 pounds in 1933, and 22,411,596 pounds in 1934, an increase from 1932 to 1934 of 10,630,203 pounds, or 90 per cent.

With respect to total production in each division of the binder twine industry, the carry-over of the private manufacturers amounted to roughly 26 per cent in 1932 and 94 per cent in 1934 of total private production; the carry-over of the prisons in 1932 amounted to roughly 19 per cent and in 1934 to 45 per cent of total prison production.

Exports.

The data in Table 10, below, show the quantity, value, and unit value of domestic exports of binder twine, by principal countries of destination, since 1923. Exports of the different grades of binder twine, i.e., 500-foot Standard, etc., are not separately recorded.

Total domestic exports of binder twine declined from 74,407,000 pounds in 1923 to 6,703,000 pounds in 1934, a decrease of 91 per cent. Exports in 1934 were 40 per cent less than a total of 16,779,000 pounds in 1929. The unit value of exports declined from $0.107 in 1929 to $0.064 in 1934, a decrease of $0.043, or 40 per cent.

In 1933 and 1934 Argentina was the largest foreign market for binder twine exported from the United States, with Uruguay next in importance. Other countries were unimportant as markets for domestic exports of binder twine in these years. Argentina took 33 per cent of this country's exports in 1929, 77 per cent in 1933, and 87 per cent in 1934. Until 1928 Canada was the United States' best customer of binder twine. Since then exports to Canada have declined greatly. As will be noted from data given later in this report, for a number of years Canada has been an important source of binder twine imported into the United States. Since 1928 imports from Canada have exceeded exports to that country. Exports of binder twine to Canada in 1934 amounted to only 311,015 pounds; in the same year imports from Canada amounted to 2,948,107 pounds. Denmark, France, Russia, and the United Kingdom, formerly important markets for binder twine exported from the United States, in 1934 took none of this country's exports.

The two largest private producers since 1928 have exported something in excess of 95 per cent of all domestic exports of binder twine. The largest producer since 1929 has noticeably increased its ratio of exports in relation to the total annual exports at the expense of the other producer.

No prison-made binder twine is exported. None of the ten complainant producers with exception of one reports exports of binder twine for the years 1929 to 1934.

Imports.

By countries

Imports of binder twine increased from 18,946,000 pounds in 1929 to 47,927,000 pounds in the peak year of 1934, an increase of 153 per cent, and then declined to 25,200,000 pounds in 1934, as may be seen from the data in Table 11. In 1933 and 1934, Mexico, Cuba, and the Netherlands were, in the order named, the chief sources of imported binder twine, followed by Canada and the United Kingdom. Imports of the different grades of binder twine are not separately recorded. 1/

Unit values

In Table 11 it will be noted that the unit value of all imports since 1923 was the lowest in 1933, the same year during which total imports in quantity reached their highest point. The value of imports declined from $0.051 per pound in 1932 to $0.045 in 1933, a decrease of 12 per cent, and from $0.106 in 1929, a decrease of $0.061, or 58 per cent. The unit value of imports increased from $0.045 in 1933 to $0.056 in 1934, an increase of 24 per cent.

By quarters

Table 12 shows imports by quarters since 1931.

1/ General imports and imports for consumption for most years are identical and in other years only slightly different in amount. There are no reexports of binder twine.

Table.10- Binder Twine: Domestic Exports by Countries, 1923 to 1934.

Year	Total all Countries	Argentina	Uruguay	Denmark	France	Russia	United Kingdom	Canada	Other
				- - - - Quantity in Pounds - - - -					
1923	74,406,772	10,894,354	1,629,440	2,122,823	1,567,995	4,000	2,862,404	51,126,226	4,199,530
1925	54,246,529	4,123,631	850,058	1,504,664	1,778,852	3,330,054	1,103,336	39,206,847	2,344,087
1927	19,286,236	2,127,260	1,717,644	1,644,645	-	1,260,008	1,481,003	6,380,571	4,175,105
1928	30,525,414	4,499,072	1,001,600	886,166	-	7,414,800	1,654,022	13,250,445	1,819,309
1929	16,778,645	5,511,202	2,260,000	1,250,647	-	-	4,027,165	1,652,974	2,076,658
1930	10,995,939	3,999,136	528,000	1,005,705	352,000	-	1,900,105	1,776,614	1,434,379
1931	10,026,210	1,100,022	1,278,000	544,940	467,500	4,377,100	1,306,637	147,930	804,081
1932	11,905,608	3,766,904	1,086,000	-	-	-	14,560	6,947,900	90,244
1933	6,016,216	4,615,576	1,175,192	-	-	-	50	3,407	221,991
1934	6,703,198	5,826,663	500,000	-	-	-	-	65,520	311,015
				- - - - Value - - - -					
1923	$ 7,604,634	$ 1,030,070	$ 154,382	$ 207,013	$ 148,576	$ 440	$ 312,068	$ 5,357,760	$ 394,323
1925	7,107,384	450,741	99,819	154,234	186,806	375,600	121,444	5,433,938	284,802
1927	2,253,231	254,467	224,825	188,719	-	137,900	211,323	806,772	429,225
1928	3,303,047	448,358	101,000	90,795	-	769,155	174,654	1,527,429	191,656
1929	1,792,438	567,212	233,188	122,440	-	-	401,317	215,606	252,675
1930	1,200,666	435,418	55,000	100,696	30,580	-	190,369	233,664	154,939
1931	707,206	77,003	107,500	37,911	29,085	273,568	102,817	17,331	61,991
1932	685,861	205,352	58,975	-	-	-	730	413,317	7,487
1933	306,699	228,593	59,227	-	-	-	3	317	18,559
1934	425,829	372,014	30,833	-	-	-	-	4,046	18,936
				- - - - Unit Value - - - -					
1923	$ 0.102	$ 0.095	$ 0.095	$ 0.098	$ 0.095	$ 0.110	$ 0.109	$ 0.105	$ 0.094
1925	.131	.109	.117	.103	.105	.113	.110	..139	.121
1927	.117	.120	.131	.115	-	.109	.107	.126	.103
1928	.108	.100	.101	.102	-	.104	.106	.115	.105
1929	.107	.103	.103	.098	-	-	.100	.130	.122
1930	.109	.109	.104	.100	.087	-	.100	.132	.108
1931	.071	.070	.084	.070	.062	.062	.079	.117	.077
1932	.058	.055	.054	-	-	-	.050	.059	.083
1933	.051	.050	.050	-	-	-	.060	.093	.084
1934	.064	.064	.062	-	-	-	-	.062	.061

Source: Commerce and Navigation.

Table 11- Binder Twine: General Imports into the United States by Countries, 1923 to 1934.

Year	Total all Countries	Canada	Mexico	Cuba	Netherlands	United Kingdom	Germany	Belgium	Others
				- - - - Quantity in Pounds - - - -					
1923	13,348,588	11,530,886	339,136	620,086	603,105	-	-	53,416	201,959
1925	11,023,760	6,798,430	2,710,527	635,769	787,469	12	1,060	57,600	32,893
1927	15,804,747	7,970,871	2,993,804	816,450	3,722,903	110,183	-	140,442	94
1928	13,438,193	3,853,272	2,006,325	1,040,860	6,475,206	-	-	13,774	48,756
1929	18,946,484	9,992,106	2,825,036	1,161,781	4,920,587	4,532	-	-	42,442
1930	12,173,113	8,126,225	1,063,078	1,075,260	1,908,330	-	-	-	226
1931	22,888,580	10,686,998	4,853,777	4,735,774	2,376,150	209,280	96	624	25,881
1932	31,992,248	9,858,754	8,821,043	5,220,976	4,591,409	2,357,762	495,253	645,000	2,051
1933	47,927,491	6,928,734	14,811,005	7,722,352	8,798,332	7,170,451	872,671	1,623,746	200
1934	25,200,166	2,948,107	9,122,194	4,957,450	5,389,219	1,517,696	732,555	532,895	-
				- - - - Value - - - -					
1923	$ 1,443,252	$ 1,267,119	$ 31,016	$ 58,251	$ 63,607	$ -	$ -	$ 4,340	$ 18,919
1925	1,309,198	884,328	245,831	74,229	93,561	3	127	7,200	3,919
1927	1,837,112	943,143	363,359	92,003	411,603	12,347	-	14,628	29
1928	1,310,533	411,477	185,632	107,016	599,683	-	-	1,503	5,222
1929	2,013,360	1,129,165	297,505	133,122	448,105	408	-	-	5,055
1930	1,311,408	914,685	90,724	121,159	184,815	-	-	-	25
1931	1,890,537	939,686	384,046	372,918	177,714	14,478	9	67	1,619
1932	1,623,197	505,741	468,666	262,976	221,198	112,237	21,531	30,710	138
1933	2,177,314	312,278	664,737	362,353	401,659	310,311	36,540	89,428	8
1934	1,401,329	178,260	412,982	304,119	336,815	90,994	40,746	37,413	-
				- - - - Unit Value - - - -					
1923	$ 0.108	$ 0.110	$ 0.091	$ 0.094	$ 0.105	$ -	$ -	$ 0.081	$ 0.094
1925	.119	.130	.091	.117	.119	0.250	0.120	.125	.119
1927	.116	.118	.121	.113	.111	.112	-	.104	.308
1928	.098	.107	.093	.103	.093	-	-	.109	.107
1929	.106	.113	.105	.115	.091	.090	-	-	.119
1930	.108	.113	.085	.113	.097	-	-	-	.111
1931	.083	.099	.079	.075	.075	.069	.094	.107	.063
1932	.051	.051	.053	.050	.048	.048	.043	.048	.067
1933	.045	.045	.045	.047	.046	.043	.042	.055	.040
1934	.056	.060	.045	.061	.062	.060	.056	.070	-

Source: Commerce and Navigation/

Table 12. - Binder twine: General imports into the United States, by quarters since 1931

Period	Quantity	Value	Unit value
	Pounds		
1929	18,946,484	$2,013,360	$0.106
1931	22,888,580	1,890,537	.083
1932	31,992,248	1,623,197	.051
1933	47,927,491	2,177,315	.045
1934	25,200,116	1,401,329	.056
By quarters			
1931			
First	1,290,142	112,235	.087
Second	13,256,765	1,057,345	.080
Third	7,038,153	606,059	.086
Fourth	1,303,520	114,898	.088
1932			
First	1,920,736	113,163	.059
Second	20,845,110	1,065,141	.051
Third	6,658,862	317,540	.048
Fourth	2,567,540	127,353	.050
1933			
First	7,525,169	369,171	.049
Second	28,771,499	1,249,824	.043
Third	5,844,944	241,071	.041
Fourth	5,785,879	317,248	.055
1934			
First	7,770,252	457,389	.059
Second	10,866,077	620,562	.057
Third	3,398,390	203,368	.060
Fourth	3,165,397	120,010	.038
1935			
First	3,730,276	181,596	.049

Source: Foreign Commerce and Navigation of the United States.

Imports of binder twine in the second quarter of 1933, amounting to 28,771,000 pounds, were greater than in any quarter of the period 1931 to 1934. Imports were the heaviest for any quarter of the year in the same quarter of 1932, amounting to 20,845,000 pounds, and again in the same quarter in 1934, reaching a smaller total of 10,866,077 pounds.

There is a decided seasonal trend to imports of binder twine which increase during the first quarter, reach their peak in the second quarter, just prior to the active summer harvest season in this country, and then decline thereafter until the end of the year.

By customs districts

Imports of binder twine are made along the Great Lakes, Atlantic Coast, the Gulf and the Pacific Coast. Heaviest imports, amounting to about 48 per cent of the total, are entered through the New Orleans and Galveston custom districts. The heaviest imports on the Great Lakes are entered through the Duluth and Superior customs districts through which pass about 18 per cent of all imports. The Philadelphia and Maryland customs districts account for somewhat more than two-thirds of all binder twine entered along the Atlantic Coast. About two-thirds of all binder twine imported on the Pacific Coast is entered through the Oregon customs district.

Relation of Imports to Production

The following table shows the ratio of total imports to total production, and the ratio of imports, less domestic exports, to domestic production for consumption within the United States from 1929 to February 1935.

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Table 13 - Binder twine: Ratio of imports to production,
1929 to February, 1935

Period	Domestic production			General imports		Ratio of	
	Total (including prison)	Exported	For domestic consumption	Total	Less domestic exports	Total imports to total production	Imports less exports to production for consumption
	Pounds			Pounds		Per cent	
1929	232,071,195	16,778,646	215,292,549	18,946,434	2,167,838	8.16	1.01
1931	190,214,064	10,026,210	180,187,854	22,888,580	12,862,370	12.03	7.14
1932	222,837,517	11,905,608	210,981,909	31,992,248	20,086,640	14.35	9.52
1933	193,466,996	6,016,216	192,450,780	47,927,491	41,911,275	24.15	21.78
1934	150,357,420	6,703,198	143,654,222	25,200,116	18,496,918	16.76	12,88
1935 Jan.-Feb.	23,190,233 1/	2,852	23,187,381	230,469	227,617	.99	.98

1/ Partly estimated

-3477-

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The data in Table 13 indicate that there was an increasing ratio of imports to domestic production from 1929 to 1933 and a decreasing ratio thereafter. Domestic production of binder twine for sale and consumption within the United States in relation to general imports, less domestic exports, shows a ratio of 21.78 per cent in 1933 and a ratio of only 1.01 per cent in 1929, as compared with a ratio of 24.15 in 1933 and a ratio of 8.16 in 1928 when all imports are contrasted with total production for both export and domestic consumption.

The data in Table 14 show the ratio of binder twine imports to total private production and separately to production by the complainants and also to production by all other manufacturers, including the largest producer, from 1929 to 1934, and by quarters in 1933 and 1934. It will be noted that imports reached their peak in the second quarter of 1933, both in absolute amount and in ratio to either total private production, or production by the complainant producers, or production by other manufacturers. The ratio of imports to total private production in this quarter rose to 73 from 18 per cent in the first quarter, and then declined in the following two quarters to 19 per cent. There was a corresponding but minor peak in the following year, when in the second quarter of 1934, the ratio of imports to total private production rose to 35 per cent. The ratio of imports to production by the complainant companies was 26 in 1929, 40 in 1932, 74 in 1933, and 54 in 1934.

Table 14 - Binder twine: Ratio of imports to private domestic production 1929 to February 1935.

Period	Private domestic production by: All Companies (total)	Complainant producers	Other producers	General imports	Ratio of imports to production by: All	Complainant	Other
	Pounds		Pounds		Per cent		
1929	184,749,645	74,067,629	110,682,016	18,946,434	11.26	25.58	17.12
1931	138,052,864	67,671,325	70,381,039	22,838,580	16.58	33.32	32.52
1932	159,175,842	79,120,940	80,054,902	31,992,248	20.10	40.43	39.96
1933	141,331,259	64,613,382	76,712,877	47,927,491	33.91	74.17	62.48
1934	100,355,097	46,524,644	53,830,453	25,200,116	25.11	54.17	46.81
Jan-Feb 1935	13,374,000	5,834,000	7,540,000 1/	230,469	1.72	3.95	3.06
By quarters							
1933-First	41,451,145	19,843,865	21,607,280 1/	7,525,169	18.15	37.92	34.83
Second	39,433,677	19,357,253	20,126,419 1/	28,771,499	72.87	148.63	142.95
Third	30,217,433	11,735,030	18,482,353 1/	5,844,944	19.34	49.81	31.62
Fourth	30,173,999	13,682,179	16,496,800 1/	5,785,879	19.17	42.29	35.07
1934-First	29,321,739	14,605,750	14,715,989 1/	7,770,252	26.50	53.20	52.80
Second	31,389,641	15,323,281	15,566,360 1/	10,866,077	34.62	68.67	69.80
Third	20,965,922	9,000,463	11,965,459 1/	3,398,390	16.21	37.76	28.40
Fourth	18,677,795	7,095,150	11,582,645 1/	3,165,397	16.95	44.61	27.33

1/ Partly estimated

Prices of Binder Twine

The price system

The open price provisions in the Code of Fair Competition for the Cordage and Twine Industry did not change the price system which has prevailed in the private binder-twine manufacturing industry for a number of years.(*) The code provisions, given in Appendix A, merely made possible the continuance of a system whereby one or the other of the leading manufacturers announces, usually during March or April of each year, prices which, through established discounts, are rigidly adhered to by all private producers until new prices are set.

Prices for prison-made binder twine are usually lower than prices for privately manufactured binder twine. In the past the differential has been greater than in the last few years. In 1932, 1933, and 1934, the prices for prison-made twine have ranged from about two-fifths of 1 cent to 1½ cents per pound less than prices for privately manufactured twine, allowances being made for the various discounts effective. The average differential in the 1932-1934 period was between 1/2 to 3/4 cent per pound.

In the prison industry prices for the selling season announced by the Minnesota prison authorities a week or two earlier than the date on which prices are set in the private industry are, for the most part, used as bases for the other prison producers in publishing their prices for the year.

Domestic prices and the prices of raw fiber

Once-yearly price changes have made for a rigid price structure with respect to the domestic binder twine industry. Thus in the last few years wholesale prices of domestic binder twine have not reflected the changes in the price of raw fiber nearly as quickly and as much as have the wholesale prices of imported binder twine. Therefore, with falling fiber prices, greater competition from imported binder twine has been experienced.

The accompanying chart(**)shows graphically through curves the relation of the wholesale prices of the two leading grades of domestic binder twine, 500-foot Standard or White Sisal, and 600-foot manila, - along with two composite prices of fiber (based on New York quotations) largely used in the manufacture of each grade of twine. For further comparison there is a curve showing the unit value of imported binder twine, inasmuch as the wholesale prices of imported twine are determined to a great extent by the entered value of imports. The curve showing the trend of the composite weighted price of henequen, No. 2 British East African sisal, and grade B Java sisal represents the New York prices of fiber used in the manufacture of 500-foot Standard or White Sisal twine, and the curve showing the composite weighted price of grades J-2 and G abaca, No. 1 British East African sisal and Grade A Java sisal represents the prices of fiber used in the manufacture of 600-foot Manila twine. All data upon which the curves of the chart are based are given in Appendix B.

(*) See Appendix A for price discounts followed by the industry.
(**) For the data upon which this chart is based, see Appendix B.

From the curves of the chart it may be seen that, although the New York price of hard fiber fell rapidly from 1929 to 1932 and 1933, there was considerable lag in the lowering of the wholesale prices of domestic binder twine. In fact, prices of domestic binder twine were raised slightly in the first quarter of 1929 and then held to this higher level to be raised again, this time 6 per cent, in the first quarter of 1930. It may be seen from the price curves that, although the domestic industry lowered its prices of binder twine twice in 1931, and once again in April, 1932, before reducing them in 1933 to the lowest level in years, the unit value of imported binder twine fell more rapidly and as time went on became more sensitive in reflecting the trend of raw fiber prices.

Both fiber price curves reached their lowest point in the second quarter of 1932, - that of henequen and sisal dropping 2.36 cents, and that of abaca and sisal to 2.67 cents. It was not, however, until the following April, 1933, just after a sustained and moderately sharp decline in the unit value of imports, that the domestic industry reduced its wholesale prices to their lowest level, - 500-foot twine to 6 cents a pound and 600-foot twine to 7 cents a pound. Twine prices were raised about 29 per cent in the first quarter of 1934, following a limited increase in the prices of fiber and in the unit value of imports. In April, 1935, however, domestic wholesale twine prices were again lowered, following a decrease in raw fiber prices and a corresponding decrease in the unit value of imports.

The spread between raw fiber prices and wholesale prices

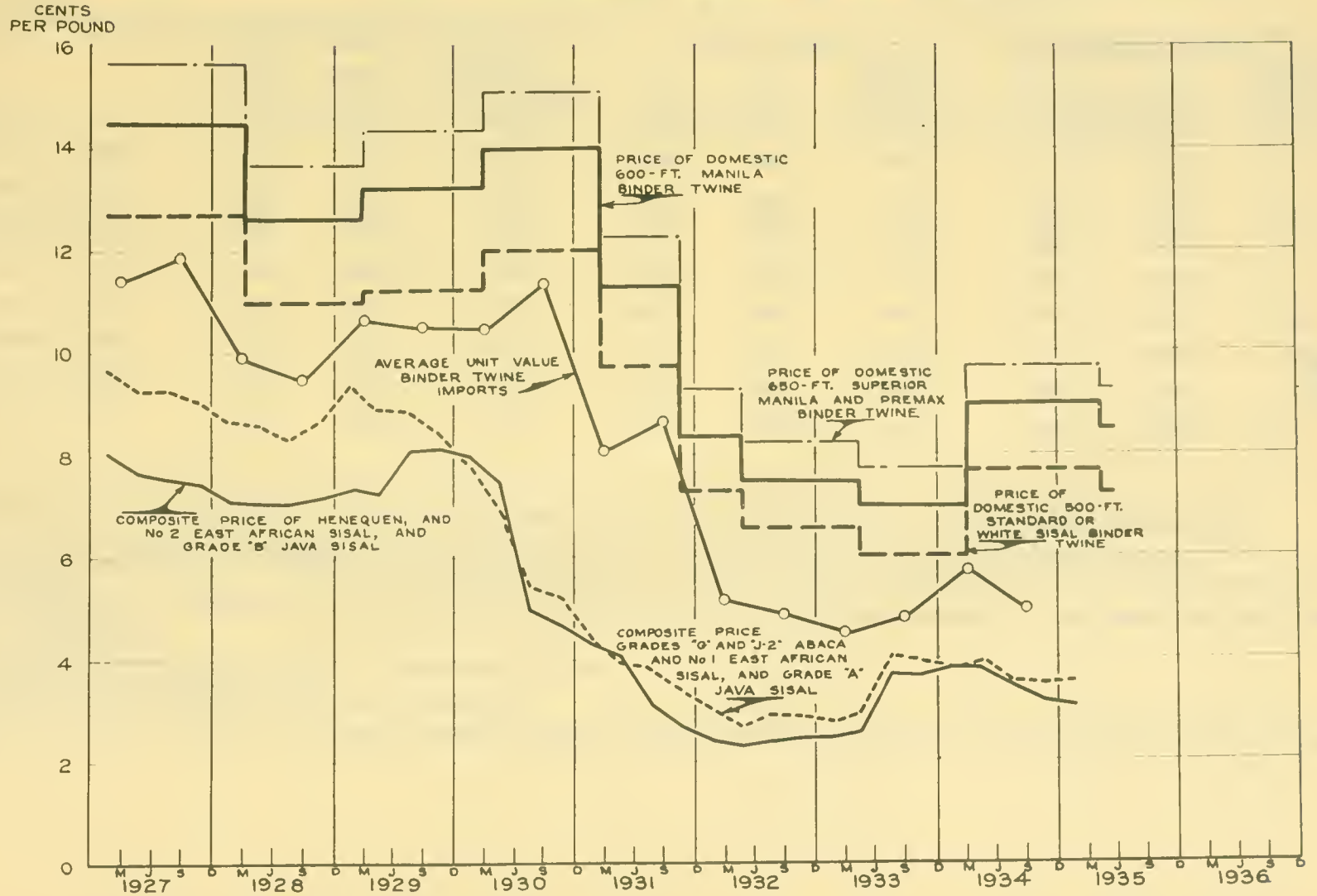
Table 15 shows the wholesale prices(*) of 500-foot Standard or White Sisal, 600-foot manila, and 650-foot Superior Manila and Premax twines and a composite weighted price of the fiber used in the manufacture of each grade. The fiber prices, wherever related to the wholesale twine prices for a given period, are, with two exceptions where twine price changes occurred twice in 1931, for a period beginning approximately two months before the price of twine was changed and ending two months before a new twine price was set.

From the data in Table 15, it may be seen that the ratio of the price of fiber to the wholesale price of 500-foot twine decreased after 1930 from roughly 64 per cent in the period March, 1928, to March, 1931, to 38 per cent in the period April, 1932, to April, 1933, and again rose only to 43 per cent in the period April to June, 1935. There was a similar decrease in the ratio of the price of fiber to the wholesale price of 600-foot twine. There was a decrease in the ratio of the price of grade G abaca to the price of 650-foot Superior Manila twine from 65 per cent in the period March, 1928, to March, 1929, to 38 per cent in the period April to June, 1935.

More significant, however, than the ratio of fiber prices to wholesale twine prices, is the difference between the wholesale prices and fiber prices viewed as an absolute amount over a period of years. The cost of fiber is the largest single item in total material and manufacturing cost in the production of binder twine. For six leading domestic

(*) See Appendix A for discounts prevailing in the industry.

NEW YORK PRICES OF RAW HARD FIBRE AND WHOLESALE PRICES OF DOMESTIC BINDER TWINE, AND THE UNIT VALUE OF IMPORTED BINDER TWINE, 1927 TO 1935



SOURCE: CORDAGE TRADE JOURNAL, PRICES BY MESSRS. HANSON AND ORTH, N.Y.

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TABLE 15

WHOLESALE PRICES OF BINDER TWINE IN RELATION TO NEW YORK PRICES OF RAW FIBRE 1/, 1928 to 1935

Price Period	500 Ft. Standard or White Sisal			600 Ft. Manila			650 Ft. Superior Manila and Promax		
	Price of Twine	Price of Fibre 2/	Ratio of Fibre Price to Twine Price	Price of Twine	Price of Fibre 3/	Ratio of Fibre Price to Twine Price	Price of Twine	Price of Fibre 4/	Ratio of Fibre Price to Twine Price
	Cents per pound		Per cent	Cents per pound		Per cent	Cents per pound		Per cent
March 31, 1928 to March 12, 1929	.1100	.0724	65.82	.1263	.0869	68.80	.1375	.0892	64.87
March 13, 1929 to March 16, 1930	.1125	.0752	66.84	.1325	.0896	67.62	.1438	.0860	59.81
March 17, 1930 to March 8, 1931	.1200	.0718	59.83	.1400	.0717	51.21	.1513	.0672	44.42
March 9, 1931 to October 16, 1931	.0975	.0372 5/	38.15	.1125	.0452 5/	40.18	.1225	.0479 5/	39.10
October 17, 1931 to April 8, 1932	.0725	.0292 6/	40.28	.0838	.0360 6/	42.96	.0925	.0396 6/	42.81
April 9, 1932 to April 9, 1933	.0650	.0247	38.00	.0750	.0297	39.60	.0825	.0350	42.42
April 10, 1933 to March 18, 1934	.0600	.0286	47.67	.0700	.0315	43.57	.0775	.0323	41.68
March 19, 1934 to April 17, 1935	.0775	.0370	47.74	.0900	.0384	42.67	.0975	.0358	36.72
April 18, 1935 to June 1, 1935	.0725	.0310 7/	42.76	.0850	.0357 7/	42.00	.0925	.0355 7/	38.16

Source: Cordage Trade Journal and data submitted to National Recovery Administration by Messrs. Hansen & Orth, New York, and domestic manufacturers.

1/ All fibre prices are for the year ended September 31 of the calendar year in which the price of twine was set, except where otherwise noted.
2/ Composite price of standard henequen, No. 2 British East African sisal, and Grade B Java sisal weighted according to relative quoted prices for each fibre and apparent consumption.
3/ Composite price of grades J2 and G abaca, No. 1 British East African sisal, and grade A Java sisal weighted according to relative quoted prices for each fibre and apparent consumption.
4/ Grade G abaca (see Appendix B).
5/ Price for the fourth quarter of 1930 and the first and second quarter of 1931.
6/ Price for the third and fourth quarters of 1931.
7/ Price for the third quarter of 1934 and the first four months of 1935.

Note: Prices for the above grades of binder twine, effective February 15, 1927, were 500-ft. Standard, $0.1275; 600-ft. Manila, $0.1450; 650-ft. Superior Manila, $0.1575 .

manufacturers the cost of fiber accounted for 43 per cent of the total cost of production in 1933 and 47 per cent in 1934. Thus, in an industry where fiber cost amounts to about half of the total cost of production, any substantial reduction of the cost of fiber (indicated by fiber prices), in relation to total cost, leaves a greater manufacturer's margin from which profits may be taken.

The spread with respect to each of the wholesale prices for the three grades of binder twine and the related raw fiber prices, shown in Table 15, is set forth in Table 16. In each instance the spread is given both in absolute amount and as an index of the amount for the period March 31, 1928, to March 16, 1930.

Table 16. - Spread between the prices of raw fiber and the wholesale prices of domestic binder twine, 1928-1935

Period	500-foot Standard or White Sisal		600-foot Manila		650-foot Superior Manila and Premax	
	Amount	1928 and 1929=100	Amount	1928 and 1929=100	Amount	1928 and 1929=100
March 31, 1928 to March 16, 1930	$0.0375	100.00	$0.0412	100.00	$0.0531	100.00
March 17, 1930 to March 8, 1931	.0482	128.53	.0683	165.78	.0841	158.38
March 9, 1931 to October 16, 1931	.0603	160.80	.0675	163.35	.0746	140.49
October 17, 1931 to April 8, 1932	.0433	115.47	.0478	116.02	.0529	99.62
April 9, 1932 to April 9, 1933	.0403	107.47	.0453	109.95	.0475	89.45
April 10, 1933 to March 18, 1934	.0314	83.73	.0385	93.45	.0452	85.12
March 19, 1934 to April 17, 1935	.0405	108.00	.0516	125.24	.0617	116.20
April 18, 1935 to June 1, 1935	.0415	110.67	.0493	119.66	.0572	107.72

It will be noted from the data in Table 16 that for both 500-foot(*) and 600-foot twine the spread between the wholesale price and the price of fiber increased after March, 1930, and was greater in every price period thereafter with the exception of the period April, 1933, to March, 1934, when binder twine prices were reduced to their lowest level. In

(*) It should be remembered that about 85 per cent of total domestic production is 500-foot twine.

this period the amount of the spread with respect to 500-foot twine fell from 3.75 cents in the base period to 3.14 cents, a decrease of 16 per cent, and the spread with respect to 600-foot twine from 4.12 cents in the base period of 3.85 cents, a decrease of about 7 per cent. The amount of the spread after April, 1935, for 500-foot twine was 11 per cent greater than in the base period, and for 600-foot twine, 20 per cent greater. Although the amount of the spread with respect to 650-foot twine increased 58 per cent in 1931 over the base period, it declined to less than the amount of the base period from October, 1931, to March, 1934. Thereafter, however, it rose above the amount in the base period, 16 per cent in 1934 and 8 per cent in 1935.

Effect of the National Recovery Program

Labor provisions of the code

The Code of Fair Competition for the Cordage and Twine Industry prohibited employment in the industry of all persons under 16 years of age, and of all persons under 18 in operations or occupations which were hazardous in nature or dangerous to health. The code contained a number of provisions with respect to wages and hours which were pertinent to this complaint.

(a) Wage provisions. - The minimum hourly wage to be paid any worker in the industry was 30 cents in specified southern States and 32½ cents in all other States. There was no minimum weekly wage for plant or factory workers. The minimum rate of pay for all office and clerical employees was $14 per week. It was further provided that "Every member of the industry shall increase the rate of pay of all employees paid either by hour or piece, *** and shall increase the rate of pay for all employees paid by the day, week, or month, now receiving less than thirty-five dollars ($35.00) per week, *** to not less than ninety per cent (90%) of the rates paid by said member of the industry, *** for the same class of work at the same place of business in June, 1929, provided that no employee shall be paid less than the minimum fixed in this Code."

(b) Hour provisions. - Factory and plant workers and office and clerical employees were not permitted to work in excess of 40 hours a week, except that they might have been employed 48 hours in any one week provided their average employment for any calendar quarter in the year did not exceed 40 hours per week. All factory and plant workers were to receive time and one-third for all time over 40 hours a week. Shipping crews, watchmen, engineers, cleaners, etc., might not have been employed in excess of 44 hours a week, except in event of emergency, and must have been paid time and one-third for overtime.

Employment and payroll

The hours and wages of workers employed by the six leading producers in the manufacture of about 98 per cent of the total binder twine output of the private industry are shown in Table 17. Employment and payroll data shown in this table are based on information submitted for all the mills operated by these companies and are representative of production in such widely scattered States as Massachusetts, Ohio, Illinois, and Louisiana.

TABLE 17

Binder twine: Employment and payroll for the six leading private domestic producers, 1929 and 1932 to January, 1935.

Period	Number of employees	Hours per worker per week	Man-hours per payroll period	Total weekly payroll	Average weekly wage	Average hourly wage
Average 1/						
1929	1,435	48.5	69,529	$30,302	$21.12	$0.436
1932	1,501	49.1	73,677	27,994	18.65	.380
1933	1,367	44.1	60,344	22,340	16.34	.370
1934	1,196	38.2	45,641	19,843	16.59	.435
January, 1934	1,372	38.6	52,897	22,002	16.04	.416
- - - - - - - - - - Code effective March 7, 1934 - - - - - - - - - -						
April, 1934, to January, 1935	1,107	38.0	42,053	18,743	16.93	.446
15th of month						
1932						
January	1,325	44.0	58,236	23,791	17.96	.409
April	1,516	44.5	67,476	26,010	17.16	.385
July	1,897	58.0	109,957	40,618	21.41	.369
October	1,266	46.6	59,040	21,557	17.03	.365
1933						
January	1,518	47.6	72,202	25,367	16.71	.351
April	1,399	43.4	60,754	21,465	15.34	.353
July	1,202	46.8	56,217	20,501	17.06	.365
October	1,347	38.8	52,201	22,028	16.35	.422
1934						
January	1,372	38.6	52,897	22,002	16.04	.416
- - - - - - - - - - Code effective March 7, 1934 - - - - - - - - - -						
April	1,455	38.2	55,519	23,976	16.48	.432
July	1,035	37.8	39,129	17,584	16.99	.449
October	923	37.9	35,018	15,808	17.13	.451
1935						
January	1,015	38.0	38,546	17,603	17.34	.457

Source: Complaint and other data furnished the National Recovery Administration.

1/ January, April, July, October.

From the data of the foregoing table it may be seen that the six leading producers, accounting for about 98 per cent of private domestic production, as a whole did not exceed the maximum work week of 40 hours or pay less than the minimum hourly rate of 32½ cents after going under the code. The table shows that after the adoption of the code the number of wage earners increased sharply in April, then declined even more abruptly to a new low level of 923 in October, 1934, and rose only to 1,015 in January, 1935. The trend of the total weekly payroll after the code became effective followed the course of the number of workers engaged. After the code became effective, however, there was a gradual upward trend in the weekly wage and the hourly rate, the former increasing from $16.48 to $17.34 from April, 1934, to January, 1935, and the latter increasing from $0.432 to $0457 during the same period.

Separate data for the operations of each producer indicate that none paid less than the minimum hourly rate in the post-code period, although two complainant producers in a total of four payroll periods slightly exceeded the prescribed work week.

The data of the above table indicate that the binder twine industry complied with the code admonition that hourly wages should be increased at least to 90 per cent of what they were in June, 1929.

Part of the data in the foregoing table is expressed in the form of indices of 1929 in Table 18.

Table 18.- Binder twine: Indices of employment and payroll for the six leading private domestic producers, 1929 and 1932 to January, 1935

Period (15th of specified month)	Number of employees	Hours per worker per week	Average weekly wage	Average hourly wage
		1929 = 100		
1929	100.0	100.0	100.0	100.0
1932	104.6	101.2	88.3	87.2
1933	95.3	90.9	77.4	84.9
1934	83.3	78.8	78.6	99.8
January, 1934	95.6	79.6	76.0	95.4
----------Code effective March 7, 1934-------				
April, 1934, to January, 1935	77.1	78.4	80.2	102.3
1933				
January	105.8	98.1	79.1	80.5
April	97.5	89.5	72.6	81.0
July	83.8	96.5	80,8	83.7
October	93.9	80.0	77.4	96.8
1934				
January	95.6	79.6	76.0	95.4
----------Code effective March 7, 1934-------				

Table 18. - Binder twine: Indices of employment and payroll for the six leading private domestic producers, 1929 and 1932 to January, 1935 (Cont'd)

April	101.4	78.8	78.0	99.1
July	72.1	77.9	80.5	103.0
October	64.3	78.1	81.1	103.4
1935				
January	70.7	78.4	82.1	104.3

Table 19 shows indices for wages paid and employment by the five leading complainant producers, for four payroll periods during a 12-month period preceding the effective date of the code and during a like period after the code went into force.

Table 19. - Binder twine: Indices for wages paid and employment by the five leading complainant producers before and after the code became effective on March 7, 1934

Period (week ending 15th of month)	Number of employees		Hours per worker per week		Average weekly wage		Average hourly wage	
	Five complainants		Five complainants		Five complainants		Five complainants	
Before code								
April, July, October, January, 1934	100.0		100.0		100.0		100.0	
After code								
April, July, October, 1934, January, 1935	83.0		90.3		105.9		117.4	
1934								
April	111.4		91.3		103.2		113.3	
July	76.4		89.3		107.7		120.8	
October	64.6		89.3		106.9		119.8	
1935								
January	79.6		90.5		107.1		118.2	
	74.1		93.3		105.9		113.8	

The indices of the above table indicate that the five leading complainant producers did not increase employment after the code became effective, but reduced the number of workers employed and the hours per worker per week. Weekly wages were increased, as reflected in hourly rates, or vice versa, in the post-code period. The five leading complainant producers increased weekly wages 5.9 per cent and hourly wages 17.4 per cent in the post code period. The average hourly wages paid by the five complainant producers and the largest manufacturer in the pre-code period were roughly 18 per cent in excess of the code minimum of 32.5 cents.

Cost of production

The total cost of manufacturing and distributing 100 pounds of binder twine together for the five leading complainants and the largest producer rose from $4.84 in 1933 to $6.03 in the first half of 1934, an increase of 25 per cent, as may be seen from the data in Table 20. The cost of fiber, an item representing 47 per cent of total production cost in the first half of 1934, increased 38 per cent, the largest increase in any cost. Labor cost, amounting to only 14 per cent of total production cost, increased 21 per cent.

Table 20 shows the costs of manufacturing and distributing binder twine for the six producers in 1933, before the code, and in the first half of 1934. The code became effective March 7, 1934.

Table 20. - Binder twine: Production costs of the six leading domestic manufacturers, including the five leading complainant companies, 1933 and first half of 1934

Item of Cost	Cost per 100 pounds of binder twine: Weighted average cost: 1933	Weighted average cost: First half of 1934	Increase (+) over 1933	Ratio to total cost: 1933	Ratio to total cost: First half of 1934
			Per cent	Per cent	
Materials -					
Fiber	$2.170	$2.855	37.89	42.80	47.34
Burlap	.093	.126	35.09	1.92	2.09
Oil	.160	.179	11.35	3.31	2.96
Other	.066	.073	9.82	1.37	1.21
Total	2.389	3.233	35.22	49.39	53.60
Labor	.678	.820	21.02	14.01	13.60
Depreciation	.145	.157	8.08	3.00	2.60
Factory Expense	.697	.752	7.88	14.42	12.47
General and administrative expense	.245	.323	32.12	5.06	5.36
Total material and manufacturing cost	4.154	5.285	27.19	85.88	87.63
Selling expense	.683	.746	9.27	14.12	12.37
Total (all costs)	4.837	6.031	24.78	100.00	100.00

Source: Complaint and other data furnished the National Recovery Administration.

Labor cost and factory expense each was in smaller ratio to total cost during the first half of 1934 than in 1933. About equal in amount, the two together represented 28 per cent of total cost in 1933 and 26 per cent of total cost in the first half of 1934.

TABLE 21

Binder twine: Increases in production cost items in the first half of 1934 over 1933 and ratio of separate cost items to total cost in 1933 and the first half of 1934 for the five complainant producers.

Item of cost	First half of 1934 increase (+) or decrease (-) over year 1933	Ratio to total cost, Five producers	
	Five complainant producers	1933	First half of 1934
		Per cent	
Materials -			
Fiber	+24.89	41.67	43.32
Burlap	+14.42	1.90	1.81
Oil	+12.00	3.20	2.98
Other	+ 1.10	1.66	1.40
Total	+22.81	48.43	49.51
Labor	+17.78	15.61	15.30
Depreciation	0	3.36	2.80
Factory expense	+ 9.01	11.76	10.67
General and administrative expense	+38.33	7.43	8.56
Total material and manufacturing cost	+20.48	86.60	86.84
Selling expense	+17.98	13.40	13.16
Total (all costs)	+20.14	100.00	100.00

It will be noted in Table 2, that, the item of depreciation for the five producers did not increase, and there was an increase of 38 per cent in the item of general and administrative expense.

APPENDIX A

Code of Fair Competition for the Cordage and Twine Industry (No. 303), approved February 21, 1934

Schedule "B"

Division for Manufacturers of Binder Twine

Filing Price Schedules

1. Every member of this Division offering Binder Twine for sale shall file with the Code Authority a schedule of prices and terms setting forth the grade and lengths per pound, prices per pound, or the prices per bale of fifty (50) lbs. gross weight, quantity discounts, terms and date of payment, date and amount of cash discount, and conditions of delivery; each such schedule shall set forth only the lengths therein shall be, approximately five hundred (500) feet, five hundred fifty (550) feet, six hundred (600) feet and six hundred fifty (650) feet to the pound. Such schedules shall represent the basis upon which Binder Twine is to be sold by members when selling to retail dealers. Such schedule shall also set forth full information as to all discounts allowed to purchasers. Such schedule, when filed with the Code Authority, shall become effective on the date filed and shall remain in force until a new schedule is filed and becomes effective.

2. Copies of all schedules filed by manufacturers shall be open to examination, as the Administrator may determine, to parties in interest.

3. The Code Authority, at such time and after such study as it may deem proper, shall recommend to the Administrator the establishment of a definite quantity (bales) of binder twine, the purchase of which for a season's requirement shall entitle the purchaser to a discount, from any individual manufacturer, equal to the discount allowed by said manufacturer to jobbers. The Administrator may approve, disapprove or modify the recommendations. Pending such determination, each member shall file such discounts as he desires to make applicable to any purchaser.

4. No manufacturer shall sell, or offer to sell, Binder Twine, directly or indirectly, upon any other conditions than specified in his schedule as filed, or as may be established under the provisions of Section 3 hereof, and no manufacturer shall modify the conditions of sale by any concessions, either directly or indirectly, made subsequent to any sale.

****

Price Discounts for Binder Twine

The following price discounts have been generally effective in the private domestic binder-twine industry since 1921:

200- bale lots, 6¼ cents per bale less;
400- bale lots, 12½ cents per bale less;
10,000 to 20,000 pounds, 1/8 cent per pound less;
20,000 pounds or more, 1/4 cent per pound less.

In 1935, the largest producer listed its discounts as follows:

Dealers. - Lots of 10,000 pounds, 12½ cents per cwt.;
lots of 20,000 pounds or carloads, 25 cents per cwt.

Jobbers. - In any quantity, prior to December 29, 1933, 75 cents per cwt.;
lots up to 200,000 pounds since December 29, 1933, 75 cents per cwt.;
lots of 200,000 pounds or more since December 29, 1933, $1 per cwt.

APPENDIX B

Table A. - Quarterly prices of raw hard fiber at New York, 1927 to 1935

Period	Composite of weighted prices of: Standard Mexican henequen, No. 2 British East African sisal, and Grade B, Java sisal	Grades G. and J-2 abaca, No. 1 British East African sisal, and Grade A. Java sisal
	Price per pound	
1927		
First	$0.0807	$0.0973
Second	.0770	.0931
Third	.0763	.0931
Fourth	.0746	.0910
1928		
First	.0719	.0867
Second	.0714	.0861
Third	.0716	.0838
Fourth	.0701	.0864
1929		
First	.0740	.0940
Second	.0737	.0891
Third	.0709	.0889
Fourth	.0813	.0846
1930		
First	.0708	.0781
Second	.0753	.0690
Third	.0603	.0550
Fourth	.0467	.0521
1931		
First	.0437	.0437
Second	.0404	.0397
Third	.0318	.0381
Fourth	.0366	.0338
1932		
First	.0244	.0300
Second	.0236	.0261
Third	.0241	.0289
Fourth	.0246	.0285
1933		
First	.0243	.0276
Second	.0278	.0295
Third	.0375	.0404
Fourth	.0372	.0396
1934		
First	.0383	.0383
Second	.0382	.0398
Third	.0341	.0360
Fourth	.0313	.0355

APPENDIX B - continued

Table A. - Quarterly prices of raw hard fiber at New York, 1927 to 1935

Period	Composite of weighted prices of	
	Standard Mexican henequen, No. 2 British East African sisal, and Grade B. Java sisal	Grades G. and J-2 abaca, No. 1 British East African sisal, and Grade A. Java sisal
	Price per pound	
1935		
First	.0308	.0358

Sources: Cordage Trade Journal
and prices furnished by Messrs.. Hanson & Orth, N. Y.

Table B. - Wholesale prices of binder twine effective in the private domestic industry, 1927 to 1935 1/

Date effective	500-foot White Sisal and Standard	600-foot Manila	650-foot Superior Manila and Premax
	Price per pound		
February 15, 1927	$0.1275	$0.1450	$0.1575
March 31, 1928	.1100	.1263	.1375
March 13, 1929	.1125	.1325	.1438
March 17, 1930	.1200	.1400	.1513
March 9, 1931	.0975	.1125	.1225
October 17, 1931	.0725	.0838	.0925
April 9, 1932	.0650	.0750	.0825
April 10, 1933	.0600	.0700	.0775
March 19, 1934	.0775	.0900	.0975
April 18, 1935	.0725	.0850	.0925

Source: Data furnished the National Recovery Administration.
1/ Yearly price changes are announced in the Cordage Trade Journal

Table C. - Unit of imports for six-month periods, 1927 to 1934

Period	Value per pound	Period	Value per pound
1927		1931	
First	$0.1144	First	$0.0804
Second	.1194	Second	.0864
1928		1932	
First	.0997	First	.0518
Second	.0952	Second	.0482
1929		1933	
First	.1066	First	.0446
Second	.1057	Second	.0480
1930		1934	
First	.1045	First	.0578
Second	.1139	Second	.0493

CIGARS (No. 29)

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SURVEY OF INFORMATION

ON

CIGARS

April, 1935

Status of Complainant under the National Industrial Recovery Act

This is a report on a complaint under Section 3 (e) of the National Industrial Recovery Act, with respect to imports of cigars from the Philippine Islands, especially cigars manufactured to retail for 2-for-5 cents or less, filed by the Code Authority of the Cigar Manufacturing Industry. The Code of Fair Competition for this industry was approved June 19, 1934.

Subject of Complaint and Tariff Status

Cigars are dutiable under Paragraph 605 of the Tariff Act of 1930 at $4.50 per pound and 25 per cent ad valorem; they were dutiable at the same rate under the Tariff Act of 1922.

Section 301 of the Tariff Act of 1930 provides "that all articles, the growth or product of or manufactured in the Philippine Islands from materials the growth or product of the Philippine Islands or of the United States, or of both,***coming into the United States from the Philippine Islands shall hereafter be admitted free of duty."

On December 2, 1933, the Attorney General of the United States ruled that "articles brought into continental United States from the Philippine Islands are subject to the provisions of Section 3 (e) of that Act (National Industrial Recovery Act) concerning articles 'imported into the United States in such manner or in such circumstances' as to render ineffective or seriously endanger the maintenance of any code or agreement."

The Domestic Industry

Distribution

On the basis of the Census of Manufactures there were 646 cigar manufacturing establishments in the United States in 1933. During this year the industry produced 4,510 million large and small cigars valued at $135,576,000; it employed an average of 53,084 workers to whom it paid $29,558,000 in wages. The leading cigar producing states with the percentage of the total United States output derived from each were Pennsylvania, 37.6; Florida, 10.8; New Jersey, 10.3; New York, 6.2; Ohio, 5.0; South Caroline, 4.9; Kentucky, 4.9; Michigan, 4.6; and Virginia, 3.5.

The total volume of cigar production in the United States has been declining of more than a decade, the downward trend being particularly noticeable after 1930. Comparative figures for production, employment, and wages in the industry since 1927 are given in Table 1.

Table 1. - Trend of production, employment, and payrolls, in the cigar industry by census years since 1927

Year	Number of establishments 1/	Average number of wage earners	Wages	Value of Products
			Thousands	
1927	1,960	94,556	$76,470	$336,026
1929	1,587	84,166	67,222	309,211
1931	1,063	68,182	46,074	225,149
1933	646	53,684	29,558	135,576

Source: Census of Manufactures, Bureau of the Census.
1/ Only those reporting output valued at $5,000 or more.

Production

Cigars are grouped into five classes according to their retail sale price for the purpose of collecting internal revenue. The groups range from the cheap class A cigars, which retail at not more than 5 cents each and pay a tax of $2 per thousand, to the expensive class E cigars, which retail at more than 20 cents each and pay a tax of $13.50 per thousand. A study of the relative production of the different grades of cigars, as shown by the sale of internal revenue stamps, indicated that the decline in total production has been due almost entirely to a decline in the demand for the more expensive cigars.

Table 2 compares the annual production of Class A cigars since 1926 with the production of cigars retailing for more than 5 cents. It may be noted that the production of the less expensive cigars rose 36 per cent from 1926 to 1934, while at the same time the production of the more expensive cigars declined 83 per cent.

Table 2. - Domestic production of class A and all other large cigars, 1926-1934 1/

(Millions of cigars)

Year	Large cigar production			Index of large cigar production		
	Class A	All other	Total	Class A	All other	Total
1926	2,886	3,703	6,589	100	100	100
1927	3,175	3,396	6,571	110	92	100
1928	3,310	3,144	6,454	115	85	98
1929	3,583	2,969	6,552	124	80	99
1930	3,574	2,315	5,889	124	63	89
1931	3,688	1,631	5,319	128	44	81
1932	3,491	952	4,443	121	26	67
1933	3,690	655	4,345	128	18	66
1934	3,929	640	4,569	136	17	69

Source: Annual report of the Commissioner of Internal Revenue.
1/ Based on stamp tax sales.

All cigars selling for 5 cents each or less are reported in internal revenue statistics in the class A group. These statistics, therefore, afford no basis for a comparison of the relative changes in the production of cigars selling for less than 5 cents each. Some indication of the changes which have occurred in the production of the cheaper grades of cigars may be gathered from the data given in Table 5, which is based upon the statistics furnished by ten domestic cigar manufacturers. In 1929 only two of these companies were making cigars selling for 2-for-5 cents or less. Practically the entire production in this classification was cheroots or little cigars made by one machine producer and sold for less than 2-for-5 cents. The reported production of 2-for-5 cent cigars has grown very rapidly, rising from 8 million in 1929 to 222 million in 1934, an increase of about 37000 per cent. At the same time the reported production of all other grades of cigars, even including those retailing for less than 2-for-5 cents, has declined sharply. On the basis of these data, it appears that the greater part of the gain which has taken place in the production of class A cigars since 1929 has resulted from the phenomenal increase in the production of 2-for-5 cent cigars. It may be noted also that the machine production of 2-for-5 cent cigars rose 65 per cent from 1933 to 1934, while the production of hand-made cigars in the same group declined 8 per cent.

Table 3. - Cigar production of ten reporting companies distributed by retail price classification, for fiscal years, 1929-1934 1/

(Thousands of Cigars)

Fiscal year ending June 30	Cigars produced to retail at - : Less than 2-for-5 cents	2-for-5 cents	From 2-for-5 cents to 5 cents each	Over 5 cents each	Total, all cigars
			Four machine producers		
1929 2/	271,217	2,630	215,326	84,922	574,094
1932	157,034	35,375	134,601	32,399	359,407
1933	106,472	68,524	127,161	12,912	315,068
1934	89,096	115,160	173,183	6,012	383,748
			Six hand producers		
1929 2/	0	3,630	185,692	0	189,322
1932	0	56,468	108,352	0	164,829
1933	0	117,980	88,497	18	206,494
1934 3/	0	108,666	69,898	29	178,592
			Total - ten companies		
1929	271,217	6,260	401,018	84,922	763,416
1932	157,034	91,843	242,953	32,399	524,236
1933	106,472	186,504	315,658	12,930	521,562
1934 3/	89,096	221,826	243,081	8,041	562,340

1/ Eight companies in 1929; nine companies in 1932, and ten companies in 1933 and 1934.
2/ Three machine producers and five hand producers in 1929.
3/ Partially estimated.

The decline in the total production of cigars has been in sharp contrast to the rise in the production of cigarettes. However, since 1926 the cheap class A cigars have risen in production at about the same rate as cigarettes. This strongly suggests that the future of the cigar industry is dependent in very large measure upon its ability to furnish the consuming public with a relatively cheap "smoke", which will compete with the cigarettes. In order to compete with the low-cost machine production of cigarettes, the cigar manufacturers are being forced, inevitably, to adopt machine methods of production.

Table 4. - Production of cigars and cigarettes, 1926-1934

Year	Cigar	Cigarettes	Index of production	
			Cigars	Cigarettes
	Millions			
1926	6,499	92,097	100	100
1927	6,519	99,809	100	108
1928	6,373	108,706	98	118
1929	6,519	122,392	100	133
1930	5,894	123,802	91	134
1931	5,348	117,063	82	127
1932	4,383	106,632	67	116
1933	4,300	114,874	66	125
1934	1/ 4,597	1/ 125,612	71	136

Source: Annual report of Commissioner of Internal Revenue.
1/ Based upon stamp tax sales.

Employment

The cigar industry has been able to meet the public demand for lower-priced cigars very largely as a result of technological developments in the industry which have greatly reduced the manufacturing cost of cigars. The automatic cigar-making machine has revolutionized the technique of cigar making, introducing almost complete mechanization where formerly a handicraft type of production predominated. The distribution of employment between machine and hand cigar workers as of July 1, 1934, is given in Table 5. This table also shows the distribution of employment between men and women, indicating that the hand workers are predominantly women, and that the machine workers are almost exclusively women.

Table 5. - Number of men and women cigar workers employed at various types of work, July 1, 1934

Classification	Hand workers		Machine workers		All workers		
	Men	Women	Men	Women	Men	Women	Total
Piece-workers	8,827	19,899	23	11,978	8,850	31,877	40,727
Time-workers	1,885	5,707	182	3,742	2,077	9,449	11,526
Total	10,712	25,606	205	15,720	10,927	41,326	52,253
	Percentage distribution						
Piece-workers	16.9	38.1	1/	22.9	16.9	61.0	77.9
Time-workers	3.6	10.9	0.4	7.2	4.0	18.1	22.1
Total	20.5	49.0	.4	30.1	29.9	79.1	100.0

Source: Special Tabulation of the Bureau of the Census.

1/ Less than 0.05 per cent.

The distribution of cigar workers corresponds roughly with the distribution of production among the various States. The differences between the two noted in Table 6 were due in part to the varying degree of mechanization in individual States, also in part to the lack of correspondence between the production period (1933) and the date of employment enumeration (July 1, 1934).

Table 6. - Comparison of the distribution of cigar workers with the production of cigars in various States

	Production millions of cigars 1/ 1933	Number of cigar makers July 1, 1934			Percentage of total	
		Machine	Hand	Total	Cigar production	Number of cigar makers
Penna.	1,616	3,897	8,425	12,322	37.6	30.3
New Jersey	443	2,155	3,100	5,255	10.3	12.9
Florida	466	824	5,978	6,802	10.8	16.7
New York	266	386	2,122	2,508	6.2	6.2
Ohio	214	469	1,779	2,248	5.0	5.5
Michigan	196	361	1,765	2,126	4.6	5.2
All other	1,099	3,908	5,559	9,466	25.5	23.2
Total	4,300	12,001	28,726	40,727	100.0	100.0

Source: Special tabulation of the Bureau of the Census.

1/ Tax-paid removals.

Effect of Machinery upon Employment

Machine production of cigars has grown rapidly since the first automatic machines were installed in 1919. Mechanized cigar production has been accompanied by significant changes within the cigar industry.

The direct and immediate effect of technological advances in the manufacture of cigars has been widespread displacement of labor. Table 7 indicates the extent of the technological unemployment which has resulted from the substitution of automatic machinery for hand production of cigars, estimated by the Bureau of Labor Statistics, in connection with a study of technological changes in the cigar industry in 1931.

Table 7. - Comparison of total cigar production in the United States and estimated total output and labor displacement from machine production.

(Millions of cigars)

Year	United States production of large cigars: Total	United States production of large cigars: Made by machinery	Ratio of machine production to total	Estimated number of hand workers displaced
			Per cent	
1919	7,072	182	2.6	1,331
1921	6,726	401	6.0	2,942
1923	6,950	632	9.1	4,636
1925	6,463	957	14.8	7,015
1927	6,519	1,825	28.0	13,381
1929	6,519	2,291	35.1	16,797
1931	5,348	2,912	54.4	21,356
1933	4,345	1/ 2,782	64.0	1/ 20,392

Source: Monthly Labor Review, Dec. 31, 1933, p. 13.
1/ See Leidesdorf Brief, p. 4.

Effect of Machinery upon Concentration of Production

Since the introduction of automatic machinery, competition in the cigar industry has centered around cigars manufactured to retail at not more than 5 cents each. Sustained demand in the low-price cigar field has made possible the volume of production necessary for the economical use of expensive machinery. This competition has resulted in the elimination of many of the relatively high-cost, small factories which made cigars by hand, and has concentrated production in a comparatively small number of plants using machinery. Table 8 shows the extent of the change which took place from 1921 to 1933 in the production of cigars by factories, classified according to the quantity of their output.

In 1921 the factories having an output of less than 20 million cigars a year produced 74 per cent of the total output for the year; in 1933 factories in this same group accounted for only 39 per cent of the production for the year. The 11 factories having an annual output in

excess of 40 million cigars produced 16 per cent of the year's total in 1921; the 23 factories in this class in 1933 accounted for 50 per cent of the year's output.

Table 8 - Changes in number of factories and proportion of total cigar output manufactured by factories grouped according to annual output from 1921 to 1933 1/

Annual output (millions of cigars)	Factories with classified output					
	Number in operation		Cigars produced		Percentage of total production	
	1921	1933	1921	1933	1921	1933
Under 1	13,659	6,293	1,285	328	19.0	7.6
1 to 5	620	194	1,410	456	20.9	10.6
5 to 10	178	59	1,233	409	18.4	9.6
10 to 20	85	34	1,073	469	16.0	10.9
20 to 40	25	17	668	475	10.0	11.0
Over 40	11	23	1,057	2,163	15.7	50.3
Total	14,578	6,620	6,726	4,300	100.0	100.0

Source: Annual reports of the Commissioner of Internal Revenue.

1/ The greater part of the factories producing less than one million cigars each year represents individual or home production not included in census statistics which are limited to establishments having an output valued at $5,000 or more each year.

The trend toward concentration of production of cigars in the hands of a few large companies has been even more pronounced than is indicated by Table 8. The Bureau of Internal Revenue lists the various cigar factories as physical units without reference to ownership. Practically all the large corporations own two or more large factories and the ten largest companies in the industry have for several years produced more than half of the total United States output.1/ These larger companies depend almost entirely upon machine production, and while their profits have been greatly reduced during the depression, their record has been much better than the average industrial corporation. Table 9 shows the total net income available for dividends of six large companies from 1926 to 1934. The combined net income of these companies was lowest in 1931; it rose somewhat in 1932 and 1933, and in 1934 advanced nearly 50 per cent over the average for the preceding three years.

1/ See Reavis Cox, Competition in the American Tobacco Industry (Columbia University Press, 1933), p. 95; also Willis N. Baer, The Economic Development of Cigar Industry in the United States (Lancaster, Pa., 1933), p. 253; also Russell H. Mack, The Cigar Manufacturing Industry, Factors of Instability Affecting Production and Employment (University of Pennsylvania Press, 1933).

Table 9. - Net income of six large cigar companies, 1926-1934 1/

Year	Net income	Year	Net income
1926	$10,861,000	1930	$7,101,000
1927	13,570,000	1931	3,478,000
1928	14,382,000	1932	4,116,000
1929	15,357,000	1933	4,220,000
		1934	1/ 6,251,000

Source: Moody's Manual of Investments, Industrials.
1/ Net losses of two companies for the year estimated from record for first nine monts.

Effect of Machinery upon Wages

Mechanization has greatly weakened the bargaining power of cigar workers, and thereby contributed to the low-wage scale which prevails in the industry. This has resulted from the following factors:

(a) Automatic cigar machine operators require very little training or skill and the workers are almost exclusively women. This type of labor has never received a very high wage.

(b) The extension of machine production has created a surplus of skilled hand laborers, thereby tending to depress wages in this branch of the industry.

(c) The hand manufacturers have been subjected to increasingly severe competition from the low-cost machine producers. In their struggle for existence they have been compelled to reduce costs wherever possible, and labor has not been in a position to offer much resistance.

(d) Mechanization has probably been the most important cause of the decline in the power of the Cigar Makers' International Union of America which flourished when cigar making was a skilled hand trade. The majority of the Cigar workers are now unorganized women.

(e) During the most distressing years of the depression the wage scales in many of hand-made cigar factories were so reduced that the highly mechanized plants lost much of their competitive advantage. In order to escape the intense competition in the field of the 5-cent cigars, many of these hadn manufacturers took advantage of the low wages and cheap leaf tobacco to reduce prices to 2-for-5 cents. At the time there was very little machine competition in the 2-for-5 cent field, and these hand manufacturers experienced a gratifying increase in the volume of their sales. The machine manufacturers, however, accepted the challenge of price competition, and entered the cheap cigar field with special brands created for the purpose. Their competitive position

in this very low-price field was guaranteed by the perfection of an automatic machine which makes cheap, short-filler cigars with only about half the labor cost of the standard, long-filler machine.

Effect of the National Industrial Recovery Act upon Competition between Hand and Machine Producers

The recovery program introduced a new element into the competition between the manufacturers of low-price machine and hand-made cigars. The continued existence of hand manufacture of 2-for-5 cent cigars depended upon very low wage rates and low prices for leaf tobacco. These manufacturers found that they could not continue to make 2-for-5 cent cigars and pay NRA wages and AAA tobacco prices. Their brands had become identified by the consuming public with 2-for-5 cent cigars, and they were unable to raise their prices. They attempted this in August, 1933, when a large group signed the President's Reemployment Agreement, and jointly agreed to discontinue the production of 2-for-5 cent cigars entirely. The machine manufacturers, however, were expanding their production of 2-for-5 cent cigars rapidly at this time, and the hand manufacturers found it necessary to again drop back to the cheaper grade of cigars.

When the Code of Fair Competition for the Cigar Manufacturing Industry became effective in June, 1934, the hand manufacturers of 2-for-5 cent cigars in the York County district of Pennsylvania dismissed all except those workers who could make the code minimum wages at the prevailing piece rates. The workers retaliated by calling a strike. A committee representing employers and labor was appointed by the Code Authority for the industry to determine the cost of producing 2-for-5 cent cigars by hand in that district. This committee found that less than 50 per cent of the employees were receiving the weekly wage of $10.80 required by the code, and that the factories were making very little or no profits. It recommended (1) that slow workers be exempted temporarily from the minimum wage provisions of the code, provided prevailing piece rates be paid, (2) that the 2-for-5 cent cigar be eliminated from the United States market, and (3) that restrictions be placed upon Philippine cigar imports in order to insure the success of the second recommendation.

The first recommendation was put into effect August 15, 1934. By virtue of successive extensions it has acquired very nearly a permanent status. The second recommendation apparently has not received general approval, since the machine manufacturers have continued steadily to expand production of 2-for-5 cent cigars. By using the latest model automatic machines, these manufacturers are able to make 2-for-5 cent cigars at a profit, while complying with the minimum wage requirements of the code for their branch of the industry. The third recommendation was offered as a necessary corollary to the successful administration of the second. Obviously the domestic hand manufacturers of 2-for-5 cent cigars would gain little by restrictions upon imports from the Philippine Islands so long as the machine manufacturers of these cigars continued to expand their production.

Export of Domestic Cigars

Export markets have never constituted an important outlet for American cigar manufacturers largely because of the high duties and other restrictions on importation in foreign countries. Exports have averaged slightly more than one million cigars annually in recent years; they dropped to 923,000 cigars in the fiscal year ending June 30, 1934. On the basis of the 1932 imports Panama and the United Kingdom each took about 34 per cent of the total. In relation to the domestic production of more than 4,500 million cigars the quantity of exports is negligible.

Imports

Table 10 shows the trend of the quantity and value of cigar imports from the Philippine Islands since 1926. It will be noted that imports were unusually low in 1933 and that they rose to a peak in 1934. The total value of these imports was 15 per cent higher in 1934 than in 1933 as a result of the sharp decline in the average unit value.

Table 10. - Imports of cigars from the Philippine Island, 1926-1934

Statistical period	Quantity	Value	Unit value
	Thousand pounds	Thousand dollars	Per pound
1926	3,021	$5,047	$1.67
1927	2,645	4,142	1.57
1928	2,574	4,190	1.63
1929	2,073	3,341	1.61
1930	1,901	3,997	1.58
1931	2,056	3,105	1.51
1932	2,192	3,066	1.40
1933	1,824	2,673	1.47
1934	3,182	3,080	.97
1935 (Jan.-Mar.)	1,271	988	.78

Source: Foreign Commerce and Navigation of the United States.

The number of Philippine cigar imports has been reported in the United States trade statistics only since January 1, 1934. A fairly reliable measure of the number of these imports for earlier years, however, can be obtained from two sources, (1) the record of United States internal revenue stamps for Philippine cigars to be sold in the United States, and (2) the Philippine trade statistics of cigar exports to the United States. On the basis of these data, the number of Philippine cigars imported into the United States reached its lowest level in 1930; it increased steadily thereafter until 1934 when it was somewhat greater than in 1926. The total value of these imports did not increase in proportion to the quantity due to the decline in the average unit value. The unit value was lowest in 1933, increasing slightly in 1934. Comparative statistics of internal revenue stamp sales for Philippine cigars and Philippine cigar exports to the United States are given in Table 11.

Table 11. - Imports of Philippine cigars based upon (1) internal revenue stamp sales, and (2) exports of Philippine cigars to the United States, 1926-1934

Year	United States imports of Philippine cigars indicated by -			
	Internal revenue stamp sales	Philippine exports statistics		
		Quantity	Value	Unit value
	Thousand of cigars		Thousands	Per thousand
1926	206,184	195,327	$4,569	$23.39
1927	176.474	167,300	3,769	22.53
1928	191,397	179,570	3,856	21.47
1929	159,158	150,945	3,013	19.96
1930	154,243	144,767	2,810	19.41
1931	169,344	158,520	2,885	18.20
1932	175,012	164,616	2,886	17.53
1933	186,697	180,714	2,823	15.62
1934	210,009	203,896	3,232	15.85
1935 (Jan.-Mar.)	55,968	1/ 52,932	1/ 801	1/ 15.13

1/Preliminary.

In order to facilitate a comparison of the three statistical series showing the shipment of Philippine cigars to the United States, quarterly data from the three sources are presented in Table 12. The internal revenue stamps are sold to manufacturers in the Philippine Islands shortly before the exportation of the cigars. Shipments from the Philippine Islands are recorded as import entries into the United States from one to two months after the date of export. After due allowance is made for this lag, it appears that Philippine export and United States import statistics agree fairly closely, and that stamp sales statistics overstate actual shipments by several per cent.

Table 12. - Imports of Philippine cigars into the United States, by quarters, 1933 and 1934

Statistical period	Revenue stamp sales	Number of cigars: Philippine exports	Number of cigars: United States imports	Average value of cigars: Philippine exports	Average value of cigars: United States imports	Average weight of cigars: United States imports
	In thousands			Per thousand		Pounds per thousand
1933						
Jan.-Mar.	32,109	29,055	1/	$16.06	1/	1/
Apr.-June	33,174	29,247	1/	15.85	1/	1/
July-Sept.	54,587	53,298	1/	15.47	1/	1/
Oct.-Dec.	66,825	39,114	1/	15.45	1/	1/
1934						
Jan.-Mar.	59,693	54,814	55,215	16.03	15.67	11.9
Apr.-June	52,643	54,874	45,083	15.57	15.62	16.8
July-Sept.	33,401	31,987	58,508	15.82	14.98	17.8
Oct.-Dec.	64,272	62,221	40,293	15.95	15.72	18.1
1935						
Jan.-Mar.	55,968	2/52,932	65,378	15.13	15.59	20.1

1/ Number of cigar imports not reported prior to 1934
2/ Preliminary.

One of the most interesting aspects of Philippine cigar shipments to the United States concerns the average weight of the cigars. In 1923 and 1924 the average weight of the Philippine cigars was 18 pounds per thousand, or about the weight of standard size United States cigars. During the succeeding years the size of the Philippine cigars was gradually reduced until they weighed only 12 pounds per thousand in the early part of 1934. Concurrently with this reduction in the weight, Philippine cigars were reduced in price, declining from about $24 per thousand in the earlier years to $16 in the first quarter of 1934. The unusual aspect of this situation relates to the weight and price of Philippine cigar imports after the first quarter of 1934. The average weight per thousand rose to 17 pounds in the second quarter of the year and 18 pounds in the third and fourth, while the average price fluctuated in succeeding quarters at about the level of the first quarter. The explanation of this sudden rise in the weight of Philippine cigars seems to be as follows.

Philippine cigar shipments to the United States must be approved by the Collector of Internal Revenue in the Philippines under the provisions of Act No. 2313 of the Philippine Legislature (1916). On March 20, 1934, the Collector of Internal Revenue announced that government approval would be refused on export shipments of 2-for-5 cent cigars to the United States priced at less than $16.50 per thousand in States which have cigar taxes and $17 in tax-free States, less a 2 per cent discount for cash. These prices applied to sales to jobbers, and were amended on August 16 to permit sales to importers at $15.17 per thousand, net. These minimum prices are identical with the minimum prices on domestic 2-for-5 cent

cigars provided by the merchandising plan of the cigar manufacturing industry code. The Philippine manufacturers evidently found it necessary to offer standard size cigars at these prices in order to make sales. Despite the increase in size, the Philippine cigar imports during the last three quarters of 1934 averaged 13 per cent below the level of the first quarter.

Comparability of Philippine and Domestic Cigars

A comparison of the average landed value of Philippine cigars with the average factory value of domestic cigars indicates that the imported product competes only with the cheaper domestic grades. This comparison for census years since 1927 is shown in Table 13.

Table 13. - Comparison of average value of imported Philippine cigars and average value of domestic cigars, 1927-1933

Census years	Average value per one thousand cigars		Index of average value of cigars	
	Philippine imports 1/	Manufactured in the United States 2/	Philippine imports 1/	Manufactured in the United States 2/
			1927 = 100	
1927	$24.78	$48.29	100	100
1929	21.96	44.57	89	92
1931	20.02	39.59	81	82
1933	17.18	30.06	69	62

1/ Landed value estimated by adding 10 per cent to the average Philippine export value.

2/ Quantity and value of total cigar production as reported to the Bureau of the Census.

The Philippine cigars are primarily of the long-filler type, made by hand from native tobacco. Since 1926 the wrapper leaf used upon about 50 per cent of these cigars has been imported from the United States. This undoubtedly contributes to the attractive appearance of the Philippine cigars, which compares very favorably with domestic cigars. In recent years these cigars have been individually wrapped in cellophane, which not only makes them more attractive, but also helps to prevent drying out during the long period between manufacture and sale.

The Philippine tobacco gives the imported cigars a rather distinctive flavor which has never gained a very large consumer following in the United States. Philippine cigars have been imported into the United States free of duty since 1909; they have always been offered at relatively low prices and for many years have had the advantage of advertising and promotion work, subsidized by the Philippine Government. Despite all these favorable factors, the Philippine cigars have never supplied much more than 5 per cent of the domestic production. This suggests rather strongly the fact that the distinctive characteristics of the Philippine cigar effectively limit its market in the United States.

Comparison of trend of imports from the Philippine Islands with domestic production

Both imported and domestic cigars must pay the United States internal revenue tax, and the record of the sale of the different classes of internal revenue stamps provides a convenient and accurate means of comparing imports and domestic production.

In view of the fact that cigars retailing for not more than 5 cents each constitute 97 to 100 per cent of the total imports from the Philippine Islands, competition between these imports and domestic production is confined almost entirely to the class A group. For this reason, the trend of imports of Philippine cigars is compared with the domestic production of class A cigars in Table 14.

During the eight-year period from 1926 to 1933 imports of Philippine cigars averaged 5.4 per cent of domestic production of class A cigars. The ratio was lowest in 1930 when it dropped to 4.3 per cent; it rose thereafter to an average of 5.1 in 1933. On a quarterly basis the ratio reached a high point of 7.5 during the last three months of 1933; it declined therafter to only 3.9 per cent in the third quarter of 1934, but rose to an average of 6.1 in the final quarter of 1934. The average for the 12 months of 1934 was 5.3 per cent, almost exactly the average for the preceding eight years.

Table 14. - Comparison of total imports of Philippine cigars with United States production of class A cigars 1/. 1926-1935

	Tax-paid withdrawals of cigars for consumption in United States		
	Domestic class A	Total Philippine	Ratio of total Philippine to domestic class A
	Thousand of cigars		Per cent
1926	2,886,079	206,184	7.1
1927	3,175,158	176,474	5.6
1928	3,310,354	191,397	5.8
1929	3,582,593	159,157	4.4
1930	3,573,815	154,243	4.3
1931	3,687,784	169,344	4.6
1932	3,490,540	175,012	5.0
1933	3,689,723	186,697	5.1
1934	3,928,834	210,009	5.3
1933			
Jan.-Mar.	752,783	32,109	4.3
Apr.-June	951,204	33,174	3.5
July-Sept.	1,095,190	54,587	5.0
Oct.-Dec.	892,546	66,825	7.5
1934			
Jan.-Mar.	868,863	59,693	6.7
Apr.-June	961,007	52,643	5.5
July-Sept.	1,044,123	33,401	3.0
Oct.-Dec.	1,054,841	64,272	6.1
1935			
Jan.-Mar.	900,618	58,968	6.2

1/ As indicated by sales of internal revenue stamps.

Although there was practically no production of 2-for-5 cent cigars for more than a decade prior to 1930, a substantial part of the Philippine imports has always been of this cheap variety. A comparison of Philippine imports with domestic production of 2-for-5 cent cigars, however, cannot be made, since neither has been separately reported. On the basis of data submitted by the complainants for the automatic machine and hand production of 2-for-5 cent cigars by ten representative companies in the United States since 1929, it appears that the ratio of Philippine imports to domestic production has been declining rapidly in recent years.

In 1929 (fiscal year) ten domestic companies produced only 6 million 2-for-5 cent cigars, compared with 176 million imported in the Philippine Islands. Although a substantial proportion of the Philippine cigars in 1929 was sold for more than 2-for-5 cents, on the basis of the average price it appears that at least one-half of the total belongs in

the cheaper classification. In this year, therefore, Philippine imports of 2-for-5 cent cigars were from 10 to 15 times greater than reported domestic production of ten companies. The great expansion of domestic production of 2-for-5 cent cigars raised the production of these ten companies to a higher level than Philippine imports in 1933. In 1934 Philippine imports increased 46 per cent to a level slightly above the production of these companies. It is interesting to note, however, that from 1933 to 1934 machine production of 2-for-5 cent cigars rose 65 per cent, even more rapidly than Philippine imports. The increase in the ratio of Philippine imports to total production of 2-for-5 cent cigars in 1934 resulted entirely from the decline in hand production.

On the basis of the quarterly figures given in Table 15, it may be noted that the ratio was highest in the last quarter of 1933 and that it has been declining since then. It should also be noted that the gain which the machine producers had made in the production of 2-for-5 cent cigars has been offset to a considerable degree by the decline in their production of charoots and small cigars selling for less than 5 cents.

Table 15. - Comparison of total imports of Philippine cigars with domestic production of 2-for-5 cent cigars by ten large producers

Statistical period	Reported domestic production of 2-for-5 cent cigars: Automatic machinery	Hand	Total	Cigar imports from Philippine Islands 1/: Total	Ratio to total reported domestic production of 2-for-5s	Reported domestic production less than 2-for-5 cent 2/ cigars by automatic machinery
	Thousand of cigars				Per cent	Thousand cigars
Fiscal years:						
1929	2,630	3,630	6,260	176,221	2,542	271,217
1932	35,375	56,488	91,863	174,419	190	157,034
1933	68,524	117,980	186,504	160,496	86	106,472
1934	113,160	108,666	221,826	233,718	105	89,096
Quarters						
1932						
Jan.-Mar.	7,402	13,750	21,152	38,610	183	32,469
Apr.-June	11,226	16,559	29,785	41,190	138	35,468
July-Sept.	14,171	20,854	35,025	52,932	151	33,820
Oct.-Dec.	20,398	21,392	41,790	42,280	101	26,979
1933						
Jan.-Mar.	25,278	23,795	49,073	32,109	65	21,449
Apr.-June	28,868	30,370	59,238	33,174	56	24,224
July-Sept.	30,538	30,500	61,038	54,587	89	25,264
Oct.-Dec.	36,336	15,867	52,423	66,825	127	21,996
1934						
Jan.-Mar.	26,325	23,280	49,605	59,693	120	20,137
Apr.-June	31,104	27,227	58,331	52,643	90	21,720

1/ As reported by Bureau of Internal Revenue in form of stamp sales.
2/ Chiefly cheroots and small cigars.
3/ Domestic production data available for only the first two quarters of 1934.

Competitive Factors

Decline in cigar imports from Puerto Rico

Imports of cigars into the United States from foreign countries are subject to duties which are prohibitive to all but the most expensive grades. These duties, however, do not apply to cigars coming from either the Philippine Islands or from Puerto Rico. As a result, a substantial industry engaged in making cheap cigars by hand has developed in each of these insular possessions, dependent in very large measure upon the United States market. The wages paid to cigar makers in both Puerto Rico and the Philippines have been low, and neither comes under the labor provisions of the Code of Fair Competition for the Cigar Manufacturing Industry. However, the marketing provisions of the code apply to Puerto Rico

cigars, although they do not apply to Philippine cigars. Any competitive advantage which may accrue to manufacturers of cigars in the Philippine Islands by reason of their freedom from the labor provisions of the cigar code applies with equal force to the manufacturers of cigars in Puerto Rico. The sharp decline in cigar imports from Puerto Rico in 1933 and 1934 has more than offset the rise in imports from the Philippine Islands, the trend of combined imports from both sources being distinctly downward since 1931. Cigar shipments to the United States from both sources are compared with domestic production of class A cigars in Table 16.

Table 16. - Comparison of domestic production of class A cigars with total cigar shipments to the United States from the Philippine Islands and Puerto Rico

Statistical period	Domestic production class A cigars	Cigar shipments to the United States			
		From Philippine Islands	From Puerto Rico	Total	Ratio of total to domestic production
		Thousands of cigars			Per cent
1928	3,310,354	179,370	144,378	323,140	9.8
1929	3,582,593	150,945	153,656	309,601	8.6
1930	3,573,815	144,737	145,566	290,333	8.1
1931	3,687,784	153,520	133,986	325,506	8.8
1932	3,490,540	164,613	122,458	287,071	8.2
1933	3,689,725	180,714	63,715	244,429	6.6
1934	3,929,122	203,896	63,375	267,271	6.8
1935 (Jan.-Mar.)	900,618	52,932	9,874	62,806	7.0

Wages in the cigar industry

Wages in the cigar industry average 30 per cent or more below the general level of wages in all manufacturing industries. Table 17 indicates that the disparity between wages in the cigar industry and all manufacturing industries has had a tendency to increase since 1926.

Table 17. - Comparison of trend of wages in cigar manufacturing industry and all manufacturing industries

Statistical period	Average weekly wage		Index of average weekly wage	
	All manufacturing	Cigar industry	All manufacturing	Cigar industry
1926	$24.88	$18.45	100	100
1927	24.97	18.04	100	98
1928	25.14	17.10	101	93
1929	25.26	17.02	102	92
1930	25.54	15.97	95	87
1931	21.17	14.30	85	78
1932	17.45	12.60	70	68
1933	17.07	12.08	69	66
Jan.-Mar.	15.53	10.89	62	59
Apr.-June	16.40	11.39	66	62
July-Sept.	17.74	12.24	71	66
Oct.-Dec.	17.74	13.71	71	74
1934				
Jan.-Mar.	18.79	12.44	76	67
Apr.-June	19.68	12.91	79	70
July-Sept.	18.65	13.25	75	72

Source: Bureau of Labor Statistics. Unpublished tabulation of employment and wages in the cigar industry.

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1928	3,310,354	179,370	144,378	323,140	9.8
1929	3,583,593	150,945	153,656	309,601	8.6
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1931	3,687,784	158,520	166,986	325,506	8.8
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1928	25.14	17.10	101	93
1929	25.26	17.02	102	92
1930	25.54	15.97	95	87
1931	21.17	14.30	85	78
1932	17.45	12.60	70	68
1933	17.07	12.08	69	66
Jan.-Mar.	15.53	10.89	62	59
Apr.-June	16.40	11.39	66	62
July-Sept.	17.74	12.24	71	66
Oct.-Dec.	17.74	13.71	71	74
1934				
Jan.-Mar.	18.79	12.44	76	67
Apr.-June	19.68	12.91	79	70
July-Sept.	18.65	13.25	75	72

Source: Bureau of Labor Statistics. Unpublished tabulation of employment and wages in the cigar industry.

The low level of wages in the cigar industry is due in part to the fact that 79 per cent of the workers in the industry are women. In July, 1933, there were only 215 men among 15,935 machine workers and 10,307 men among 34,532 hand workers. Evidently the trend toward greater mechanization is responsible in large measure for the increasing proportion of women to all workers in the industry.

The low average wage paid to cigar workers is also a result of the oversupply of hand workers who have been displaced either by the technological advances in mechanical production or by the general decline in the consumption of cigars. Furthermore, the concentration of hand production in the cheaper grades has forced cigar makers' wages very low, since these cheap cigars cannot carry the burden of very large labor costs and compete with machine-made cigars. Naturally very few young workers are learning cigar making as a trade, and this has resulted in a decline in the average productive efficiency of those workers who have continued in the occupation. The remaining hand cigar makers, through lack of opportunity or adaptability to change to other types of employment, have been compelled to assume the major portion of the burden of compensating the advantages of cheap efficient machine production.

Some idea of the relative position of the skilled hand cigar maker and the semi-skilled machine worker can be gathered from Table 18 which gives comparative data for female workers of both classifications in Pennsylvania and the entire United States. It will be noted that the machine workers have received wages about 20 per cent higher than hand workers, and that hand workers' wages have declined. Although these wage rate comparisons are made on the basis of the rates paid to women, such statistics as are available indicate that wages paid to men are only slightly higher.

Table 18. - Comparison of average weekly wages of female cigar makers in 1929 and 1933 for the United States and for Pennsylvania

	United States	Pennsylvania
	Median wage	
1929 - All cigars -		
Hand	$16.65	$16.60
Machine	19.90	19.95
	Range of wages	
1933 - Class A cigars -		
Hand	$8.90 - 11.60	$7.50 - 11.23
Machine	10.71 - 13.62	9.64 - 13.67

Source: 1929 data, Bulletin No. 100, Women's Bureau, U.S. Department of Labor, p. 93.
1933, unpulbished tabulation of special survey made by the Bureau of the Census for July, 1933.

Wages for making cigars by hand

Labor cost is a relatively large item in the total cost of making cigars by hand. The manufacturer using automatic machinery has been able to make a substantial saving in labor costs which has given him a decided competitive advantage over hand cigar manufacturers. As a result, machinery has largely displaced hand production methods in all but a few sections of the United States. One of the few remaining strongholds of the hand cigar manufacturing industry is the York County district of Pennsylvania. Here the smaller independent manufacturers have formed a cooperative association to withstand the organization and advertising campaigns of the machine manufacturers. They have received substantial aid in their endeavors from the workers in the district who regard cigar making as a family affair, with fathers, mothers, sons, and daughters combining their efforts to make a family wage.

The reputation of the York County district has been based upon the production of low-priced cigars, which before 1930 were almost entirely of the grade retailing for 5 cents each. During the depression, however, machine competition in this field became very keen, and after 1931 a great many of the York County manufacturers shifted to the production of 2-for-5 cent cigars. The major portion of the burden of this drastic reduction in price was borne by the farmers, whose leaf tobacco prices in 1931-1933 dropped to less than 50 per cent of the pre-depression level. In addition, the piece rates paid to York County cigar makers for making class A cigars were reduced 32 per cent between 1931 and the first half of 1933.

Table 19 compares the average piece rates for making cigars selling for 5 cents or less by hand in York County and in other sections of the United States. It will be noted that in June, 1933, the average rate in the York County district was only 66 per cent of the rate paid in other sections of the United States.

Table 19. - Comparison of trend of average piece rates for making class A cigars by hand in York County and in other sections of the Unites States 1/.

Statistical period	Average rates for making class A cigars		Ratio of York County rate to rest of United States
	United States except York County	York County	
	Per thousand		Per cent
1931	$6.20	$5.76	93
1932	5.59	4.74	85
1933			
Jan.-June	5.55	3.89	70
June	5.78	3.89	66

1/ Average rate for rolling and bunching as reported in Statistical Survey of Hand-made Cigar Manufacturing Industry prepared by S. D. Leidesdorf & Co., and filed as brief at code hearings.

In June, 1933, according to a comprehensive investigation of the production of hand-made cigars in the United States, 66 per cent of the cigars made in the York County district were of the 2-for-5 cent classification. On the basis of this survey, it appears that York County was making about 85 per cent of all hand-made 2-for-5 cent cigars manufactured in the United States.

The average rate for making 2-for-5 cent cigars in York County in June, 1933, was $3.07 a thousand, the rate for 3-for-10 cent cigars being $4.09, and for 5-cent cigars, $5.36. Apparently the lower rate paid for making the cheaper cigars was an important factor in enabling the manufacturers to shift to this type of production. The resulting wages, however, were so low that 50 per cent of the workers in this district received less than 20 cent an hour. In contrast to this, only 15 per cent of the hand cigar makers outside the York County district received less than 20 cents an hour. Table 20 summarizes the results of the investigation relative to the wage level in the York County district and in the rest of the United States for making class A cigars by hand.

Table 20. - Frequency distribution of makers of class A cigars by hand receiving specified hourly earnings during a representative week in June, 1933 1/

Hourly wage group	Number of workers within each wage group in -		Cumulative percentage of workers receiving less than group maximum	
	United States except York County	York County	United States except York County	York County
Cents				
Under 12	9	73	0.4	4.6
12 - 13.9	26	164	1.4	14.8
14 - 15.9	63	202	3.9	27.5
16 - 17.9	106	187	8.0	39.2
18 - 19.9	177	200	15.0	51.8
20 - 21.9	280	222	26.0	65.8
22 - 23.9	462	209	44.2	78.9
24 - 25.9	303	105	56.2	85.4
26 and over	1,113	235	100.0	100.0
Total	2,539	1,596		

1/ Rollers, bunchers, and hand cigar makers, from Exhibit F of Statistical Survey of Hand-made Cigar Manufacturing Industry prepared by S.D. Leidesdorf & Co., and filed as brief at code hearings.

Effect of the National Recovery Program

The provisions of the Code of Fair Competition of the Cigar Manufacturing Industry regarding wages and hours of labor which are most significant in connection with the complaint against Philippine imports may be summarized as follows:

"No productive employee engaged in the production of stogies or hand made cigars to retail at not more than 2 for 5 cents shall be paid less than 27 cents per hour, and no machine cigar operator engaged in the production of cigars made to retail at 2 for 5 cents shall be paid less than 29 cents per hour.

"Cigar makers in the hand cigar manufacturing and stogie manufacturing industries who are classed as slow workers, up to 25 per cent of the total number of such workers, and machine cigar operators, up to 10 per cent of the total number of such workers need not receive the minimum hourly rate herein specified, provided they shall be paid the same piece rate as paid other employees of the same class."

Productive employees shall not be permitted to work more than 40 hours in any one week except during two peak seasons each year, in which the number of weeks and the number of hours per week shall be determined by the code authority, subject to the approval of the Administrator.

Wage rates in the hand cigar manufacturing industry were generally increased in July, 1933, when quite a number of manufacturers signed the President's Reemployment Agreement. In June, 1933, the piece rates for making 2-for-5 cent cigars in York County averaged $3.07 per thousand. On the basis of data submitted in connection with the complaint, it appears that a rate of approximately $4.20 per thousand was paid during the first six months of 1934. Under the rates prevailing in June, 1933, more than 90 per cent of the York County cigar makers earned less than the 27 cents an hour minimum provided in the code; during the first six months of 1934, with the higher rates prevailing under the President's Reemployment Agreement, 61 per cent of the workers received less than the code minimum.

The York County manufacturers protested vigorously against the minimum wage provisions of the code for making 2-for-5 cent cigars by hand. They declared that they could not manufacture 2-for-5 cent cigars and pay a higher rate than $4.20 per thousand. Following June 25, when the Code of Fair Competition for the Cigar Manufacturing Industry became effective, the York County manufacturers posted notices that only the faster workers who could meet the minimum wage requirements of the code would be employed. This amounted to a virtual lockout for a large proportion of the workers, and resulted in a general strike among the cigar makers of the district. The Code Authority of the Cigar Manufacturing Industry solved the difficulty temporarily by declaring an emergency in the district and authorizing the exemption of manufacturers from the minimum wage rates of the code, provided piece rates of not less than $4.20 per thousand were paid for making this grade of cigar. This order was made effective for a period of 30 days, and has been subsequently renewed several times. Since the York County manufacturers have at no time

complied with the minimum wage provisions of their code; it is impossible to measure the extent to which their costs would have been increased by code compliance. It appears, however, that piece rates were raised approximately 37 per cent after July, 1933, when a substantial proportion of the manufacturers began to operate under the President's Reemployment Agreement, and that no change has been made in these rates since then.

In contrast to the difficulties experienced by the hand cigar manufacturers operating under exemptions which practically nullified the minimum wage provisions of the code, the machine manufacturers making 2-for-5 cent cigars have been able to meet the higher minimum wage requirements of the code and expand their production. Some of the larger manufacturers have made substantial additions to their machinery equipment since the code became effective. One manufacturer has been operating at full capacity, employing 1,600 workers three shifts a day.

Despite the differential of 2 cents an hour in favor of the hand manufacturer, it appears that the minimum wage provisions of the code cannot be met by the hand manufacturing industry in competition with the machine manufacturing industry.

APPENDIX ..

Tobacco in the Philippine Islands

Approximately 40,000 people in the Philippine Islands are engaged in raising tobacco, and nearly 200,000 acres of land are devoted to the crop. Philippine tobacco consumption, however is somewhat less than half the annual production of about 100 million pounds, the remainder being exported. Nearly half of the total Philippine crop is exported in the unmanufactured state as leaf tobacco, the major part being sold to the Spanish Tobacco Monopoly. Cigars, which are the leading item in the manufactured tobacco exports, depend to a very large extent upon the United States market.

Table 1. - Comparison of total production and exports of Philippine tobacco

Statistical period	Total crop production	Tobacco exports			Ratio of total exports to total crop
		Unmanufactured leaf	All other 1/	Total	
	Thousand pounds				Per cent
Average 1926-1930	103,782	46,956	9,182	56,138	54.1
1931	95,954	49,941	8,730	58,671	61.1
1932	99,529	47,664	8,016	55,680	55.9
1933	92,042	37,250	6,167	43,417	47.2

Source: Annual reports of the Insular Collector of Customs, Philippine Islands.

1/ Leaf equivalent of cigar and cigarette exports estimated from data for raw material used in manufacture of total production.

Table 1 compares the trend of total production of tobacco in the Philippine Islands with the trend of leaf and manufactured tobacco exports. The decline in production in recent years has been due, in considerable measure, to the reaction of tobacco growers to the low prices which they have received for their crops.

Manufacture of tobacco products

The principal tobacco products manufactured in the Philippine Islands are cigarettes and cigars. Table 2 compares the trend in the manufacture of cigars, cigarettes, and smoking and chewing tobacco on the basis of the raw material requirements of each.

Table 2. Comparison of raw materials used in manufacture of Philippine tobacco products

Statistical period	Tobacco leaf used in manufacture of -				
	Cigarettes	Cigars	Smoking tobacco	Chewing tobacco	All tobacco products
	Thousand pounds				
Average 1926-1930	17,080	5,963	1,135	578	24,756
1931	14,572	5,048	967	554	21,141
1932	13,040	4,831	667	469	19,007
1933	12,374	5,384	489	432	18,679

Source : Annual reports of the Collector of Internal Revenue of the Philippine Islands.

Production and imports from the United States of cigarettes

Cigarette production in the Philippine Islands has been declining almost steadily since 1926. An important factor contributing to this decline has been the increase in the importation of cigarettes made in the United States. Table 3 compares the tax-paid withdrawals in the Philippine Islands of domestic cigarettes and the cigarette imports from the United States. Imports of United States cigarettes into the Philippine Islands increased rather steadily until 1933, when there was a sharp drop. Imports in the first six months of 1934, however, were 8 per cent of imports for the twelve months of the preceding year, while the withdrawal of domestic cigarettes dropped to 43 per cent.

Table 3. - Comparison of tax-paid withdrawals in the Philippine Islands of domestic cigarettes and cigarette imports from the United States

Statistical period	Indicated consumption in Philippine Islands of -		Ratio of imports from the United States to domestic cigarettes
	Domestic cigarettes	Cigarettes imported from the United States	
	Millions		
1926	4,903	418	8.5
1927	4,924	542	11.0
1928	4,881	709	14.5
1929	4,811	1,020	21.2
1930	4,659	1,076	23.1
1931	4,203	1,132	26.9
1932	3,929	1,053	26.8
1933	3,532	732	20.7
1934 (Jan.- June)	1,536	610	39.7

Source: Annual reports of the Collector of Internal Revenue of the Philippine Islands.

Exports of Philippine cigarettes are usually less than 1 per cent of total production. Imports from the United States regularly constitute more than 99 per cent of total cigarette imports into the Philippine Islands.

Production and exports of cigars

The trend in the manufacture of cigars in the Philippine Islands was downward from 1926 to 1933 when a slight upward movement took place. More than twice as many Philippine cigars are exported than are consumed in the Islands, and more than 85 per cent of the exports are sold in the United States. In 1933, as a result of the decline both of cigar consumption in the Philippine Islands and exports to foreign countries, the United States took more than 70 per cent of the total Philippine cigar production. Table 4 compares the changes in the distribution of the total Philippine cigar production to the different consuming markets.

Table 4. - Comparison of the distribution of total Philippine cigar production to different consuming markets

Statistical period	Philippine cigars				Ratio of exports to United States to total production
	Total production	Consumed in Islands	Exported to foreign countries	Exported to the United States	
	Thousands of cigars				Per cent
1926	357,668	108,045	43,406	206,187	57.6
1927	317,466	108,967	34,684	173,814	54.7
1928	331,838	106,871	35,540	189,427	57.1
1929	298,323	110,741	31,164	156,413	52.4
1930	283,352	102,845	27,299	153,208	54.1
1931	274,177	87,400	19,163	167,613	61.1
1932	257,959	69,855	12,890	174,909	67.8
1933	261,426	62,344	12,232	186,467	71.3

Source: Annual reports of the Collector of Internal Revenue of the Philippine Islands.

Other tobacco products

Philippine imports of chewing tobacco average about 800,000 pounds annually, practically all of which comes from the United States. These imports constitute about 60 per cent of the tax-paid consumption of chewing tobacco in the Islands. On the other hand, slightly more than 90 per cent of the tax-paid comsumption of smoking tobacco is manufactured within the Philippine Islands. Since 1926 Philippine imports of cigar leaf tobacco from the United States have averaged 273,000 pounds annually, and it is estimated that 47 per cent of the Philippine cigars which have been exported to the United States since then have been wrapped with this import leaf. In recent years the Philippine Islands have been importing increasing quantities of leaf tobacco from the United States for use in the Manufacture of cigarettes.

Reciprocal nature of tobacco trade by the United States and the Philippine Islands

An average of 48 per cent of the value of all Philippine tobacco exports from 1926 to 1934 was taken by the United States. At the same time the Unitdd States has supplied 95 per cent or more of the Philippine imports of tobacco products. Cigars constitute 90 per cent of the value of all Philippine tobacco exports to the United States; chewing tobacco and cigarettes constitute 78 per cent of the imports from the United States. It appears that the tobacco trade between the United States and the Philippine Islands is complementary in nature and very nearly equally balanced, particularly in recent years. Table 5 compares the value of Philippine exports to and imports from the United States, in total and for the leading manufactured products.

Table 5. - Comparison of the value of Philippine exports to and imports from the United States of tobacco products

Statistical period	Tobacco products of Philippine Islands			
	Exported to United States		Imported from United States	
	Total	Cigars	Total	Chewing tobacco and cigarettes
	Thousands			
Average 1926 - 1930	$3,983	$3,603	$2,678	$2,076
1931	3,407	2,885	2,669	2,342
1932	3,243	2,886	2,627	2,249
1933	2,976	2,823	2,085	1,195

Source: Annual reports of the Insular Collector of Customs, Philippine Islands.

The data given in Table 5 are taken from Philippine trade statistics. The trends indicated by this table are confirmed by United States trade statistics relative to the same tobacco trade. A summary of these statistics, which are given in Table 6, indicates that on a quantitative basis the balance of trade was favorable to the United States in both 1933 and 1934.

Table 6. - Comparison of quantity and value of United States exports to and imports from the Philippine Islands of tobacco products

Statistical period	United States tobacco trade with Philippine Islands				
	Exports to the Philippines		Imports from the Philippines		Ratio of quantity of exports to imports
	Quantity 1/	Value	Quantity	Value	
	Thousand pounds	Thousand Dollars	Thousand pounds	Thousand dollars	Per cent
Average 1926 - 1930	2,992	$2,497	5,446	$4,366	54.9
1930	3,590	2,653	6,587	3,537	54.5
1931	4,209	2,562	6,209	3,674	67.8
1932	5,207	2,448	5,754	3,503	90.5
1933	6,582	2,662	3,471	2,840	189.6
1934	5,123	3,173	4,672	3,223	109.7

Source : Foreign Commerce and Navigation of the United States, Monthly Summary, and Statement No. 2101 (Tobacco Exports) of the Bureau of Foreign and Domestic Commerce.

In connection with the comparison indicated above, it should be noted that the United States internal revenue taxes on tobacco products are collected in the Philippine Islands and the proceeds turned over to the Philippine Government. The commodity value of the tobacco shipments from the Philippine Islands to the United States is therefore overstated by official trade statistics, since these data include not only the value of the products themselves, but also the internal revenue tax which ordinarily would be collected in the United States. On this basis the value, as well as the quantity, of tobacco trade with the Philippine Islands has been favorable to the United States since 1932.

1/ Weight of cigarette exports estimated from average weight of total production.

Tobacco promotion activities

The Government of the Philippine Islands is keenly interested in the sale of Philippine cigars in the United States, since it derives a considerable amount of revenue from the internal revenue taxes collected on these cigars. In 1927 the Government established an advertising fund with an initial appropriation of $150,000 to be expended in foreign countries to advertise Philippine tobacco products. 1/

Factories may draw upon this fund on the basis of allotments determined by a Tobacco Board representing the Government and the various tobacco interests in the Islands, providing they contribute an equal amount. The advertising has been carried on almost exclusively in the United States, the amounts indicated below being drawn from the fund each year.

Table 7. - Expenditures from advertising fund for promoting sales of Philippine cigars in the United States

Year	Amount	Year	Amount
1928	$15,711	1931	$19,620
1929	20,891	1932	-
1930	14,340	1933	1/ 14,793

Source: Annual reports of the Collector of Internal Revenue of the Philippine Islands.

1/ Estimated.

1/ Act No. 3424.

Up to 1932 allotments were made from the fund for only 5-cent or higher priced cigars. In 1932 the Tobacco Board disagreed regarding the inclusion of advertising for 2-for-5 cent cigars, and no allotments were made. In 1933, however, the 2-for-5 cent cigars were given an allotment, and an estimated total of $14,793 was required of the fund. Total government contributions from this source during the six-year period from 1928 to 1933 amounted to $85,355.

In addition to the advertising subsidy indicated above, the Philippine Government has aided the sale of tobacco products in the United States by means of contributions from the Tobacco Inspection Fund. This fund is derived from fees charged by the Government for the inspection of leaf tobacco, cigars, etc., and is used to defray the cost of inspection and tobacco agricultural development work in the Philippine Islands the expense of promoting cigar sales in the United States. Since 1934 two men, having the official title of tobacco agents of the Philippine Government, have been traveling extensively in the United States for the purpose of urging upon distributors the advantages of handling Philippine cigars. In addition, a sum of money, usually $5,000 each year, has been appropriated from the Tobacco Inspection Fund to pay for general advertising of Philippine cigars in United States tobacco trade journals. Apparently an average of more than $40,000 a year of the cost of imported Philippine cigars is returned to the United States in the form of these various advertising and promotional expenditures.

Philippine cigars in relation to the National Recovery Administration

It appears that both the manufacturers and the internal revenue authorities in the Philippine Islands are anxious to avoid the charge that Philippine cigar imports are hindering the successful operation of the cigar manufacturers' code in the United States.

On March 20, 1934, the Collector of Internal Revenue of the Philippine Islands, after consultation with the principal exporters, announced that government approval would be refused on export shipments of 2-for-5 cent cigars to the United States priced at less than $16.50 per thousand in States which have cigar taxes, and $17 in tax-free States. less a 2 per cent discount for cash. These prices applied to sales to jobbers, and were amended on August 10 to permit sales to importers at a $15.17 per thousand. An additional amendment was made May 1, 1935, requiring that cigars weighing more than 13 pounds per thousand be retailed in the United States for not less than 2-for-5 cents.

Under the provisions of the merchandising plan of the cigar manufacturing industry's code, the minimum selling price to jobbers, including cash discounts, is $15.17 per thousand with $17.64 as the minimum price to retailers. The minimum price on Philippine cigars was therefore fixed at substantially the same level as the code minimum for the United States. In addition, the Philippine cigar manufacturers have expressed their willingness to abide by the various provisions of the merchandising plan.

The Collector of Internal Revenue was given power to regulate cigar exports to the United States by Act No. 2613 of the Philippine Legislature (1916) which authorized him to establish adequate rules defining the standard and type of leaf or manufactured tobacco which might be exported from the Philippine Islands. The Act requires that no leaf or manufactured tobacco be exported to the United States until it has been inspected by the Collector of Internal Revenue or his duly authorized representative; heavy penalties are provided for violations, either of the provisions of the Act or of any of the rules issued by the Collector of Internal Revenue in accordance thereto. These laws give the Collector of Internal Revenue ample power to enforce the regulations which he has issued regarding minimum sales prices of cigar exports to the United States. His problem is simplified somewhat by the fact that in the last few years approximately 80 per cent of all cigar shipments to the United States was made by four large companies.

Wages for making cigars in the Philippine Islands

Practically all Philippine cigars are manufactured by hand, the industry furnishing employment for about 12,000 workers. Statistics are not available, however, for tracing the course of wages paid to hand cigar makers in the Philippine Islands. The industry is very largely concentrated in Manila, where the average wages for female cigar makers were 63 cents per day in 1926, 64 cents in 1927, and 59 cents in 1928.

In the early part of August, 1934, more than 11,000 Philippine cigar workers struck for higher wages. On the basis of newspaper accounts it appears that $2 per thousand was paid for making cigars before the strike. After a period of 45 days, the strike was ended by the grant of a temporary increase of 25 cents per thousand in the rates, pending the completion of a comprehensive investigation by the Philippine Department of Labor. The labor department officials stated that further increases would be forthcoming if the survey of the fact-finding committee indicated that the factories could pay the higher wages, but that in any event it seemed unlikely that there would be any reductions from the new rates. According to the Secretary of Labor, the average cigar maker should earn from 40 to 45 cents a day at the $2.25 per thousand rate.

TABLE DAMASK (No. 32)

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SURVEY OF INFORMATION

ON

TABLE COVERS

April, 1935

Complainant's Status under the National Industrial Recovery Act

This is a report on a complaint to the President with respect to imported table covers and napkins, of linen or cotton, either made up or in the piece. The complaint was filed by the Code Authority of the Cotton Textile Industries, pursuant to Section 3 (e) of the NIRA.

The seven complainant companies in this case, all manufacturers of cotton damask, operate under the Cotton Textile Code, approved by the President on July 9, 1933.

Subject of Complaint

The complaint is directed against imports of table damask, table cloths and napkins, in jacquard, dobby, and plain weaves, composed of pure linen, pure cotton, or of mixed linen and cotton. Imports consist mainly of linen table covers and napkins of damask or plain weave. Less important items embraced in the complaint include linen damask and cotton damask in the piece, and cotton covers and napkins of either damask or plain weave. The only cotton and/or linen table covers not embraced in the complaint are those containing embroidery or drawn threads. Complainants make particular reference to imports of linen jacquard fabrics and finished cloths with plain or colored borders, colored border crash cloths, peasant design crash, plaids, and/or checks, fringed and/or hemmed.

Complainants state that "until recent years the word 'Linen' was closely associated with the finest type of workmanship and material, but that lately low-grade linen products have captured a substantial portion of the market by capitalizing on the reputation earned previously by superior linen products."

Tariff Treatment

Products covered by this complaint are dutiable under five separate paragraphs of the Tariff Act of 1930, as indicated in the table below, which shows the ad valorem rates carried in the present and the two previous tariff acts.

Table 1.

Tariff classification of import items alleged to be competitive

	Present tariff paragraph	Rates carried in Tariff Acts of - 1930	1922	1913
		Per cent		
Linen				
Damask piece goods	1013	45	40	35
Damask manufactures (except napkins)	1013	45	40	35
Plain-woven table covers	1023	40	40	35
Napkins, counting per square inch:				
Not over 120 threads	1014	55	55	35
Over 120 threads	1014	40	40	35
Cotton				
Damask piece goods	910	30	30	25
Damask manufactures	910	30	30	25
Plain-woven table covers, napkins, etc.	911(b)	30	30	30

The Domestic Industry

Domestic production of cotton table damask as recorded by the Census Bureau dropped considerably from 1923 to 1927 and, after a small recovery in 1929, declined sharply with the depression. Production of table damask during this ten-year period failed to keep pace with general production of all cotton woven goods; table damask represented seventy-one one-hundredths of 1 per cent of the total poundage of woven goods in 1925 and only twenty-five one-hundredths of 1 per cent in 1933. Table 2 gives Census Bureau data for the table damask industry over the period 1923-1933.

Table 2. - Domestic production of cotton table damask as recorded by the Census

Year	Quantity	Value	Unit value	Percentage of all production of cotton woven goods (poundage basis)
	Thousand pounds	Thousands	Cents per lb.	
1923	15,193	$10,852	71.4	1/
1925	14,604	12,450	85.3	0.71
1927	11,006	6,751	61.3	.45
1929	12,379	8,383	67.7	.52
1931	6,993	3,651	52.2	.38
1933	5,402	2,837	52.5	.25

1/ Not available.

Domestic production of cotton table damask, woven on either jacquard or dobby looms, is now concentrated largely in seven mills, three of them in North Carolina and one each in Virginia, Georgia, South Carolina, and Maine. The Census Bureau has received returns in recent years from 15 mills. The seven active mills reported aggregate table damask production for 1933 directly to the National Recovery Administration, representing 68 per cent of national production of all cotton damask as reported for that year by the Census Bureau. The other cotton mills possessing damask looms do not appear to have produced table damask regularly in volume during the past few years. The Cotton-Textile Institute states that production of these other mills is decidedly subordinate to that of the seven mills. Table 2a traces the course of the combined production of the seven mills which have reported directly to the National Recovery Administration, annually from 1929 through 1934, and quarterly during the past three years. The quarterly data for the past three years show some concentration of production in the first two quarters, but information at hand is not sufficient to properly gauge normal seasonality.

Table 2a. - Recent trends in domestic production of cotton table damask by a group of seven important mills reporting directly to National Recovery Administration

	Aggregate production of seven mills	Ratio to Census production total
	Thousand pounds	Per cent
Years		
1929	6,837	55.2
1931	4,482	64.1
1932	4,524	
1933	3,690	68.3
1934	3,528	
Quarters		
1932		
Jan.-Mar.	1,548	
Apr.-June	1,217	
July-Sept.	823	
Oct.-Dec.	941	
1933		
Jan.-Mar.	797	
Apr.-June	1,045	
July-Sept.	948	
Oct.-Dec.	900	
1934		
Jan.-Mar.	1,076	
Apr.-June	1,061	
July-Sept.	584	
Oct.-Dec.	807	

Table 2b is based on records compiled by the Cotton-Textile Institute covering 15 mills reporting on cotton damask, woven either on dobby or jacquard looms. It traces the course of monthly production, sales, and the course of unsold stock and unfilled orders since the beginning of 1934. It should be noted particularly that these data are in units of linear yards in contrast to Census data in units of pounds.

Table 2b. - Trends in monthly production, sales, stock, and unfilled orders, for the past 15 months, of 15 damask mills reporting to the Cotton-Textile Institute

Month	Production	Sales	Unsold Stock	Unfilled Orders
	During month		End of month	
	Thousand of linear yards			
1934				
January	722	1,061	3,376	1,246
February	749	959	3,141	1,373
March	865	485	3,478	1,119
April	838	590	3,633	1,057
May	942	666	3,921	1,029
June	814	818	3,903	859
July	730	629	4,014	852
August	652	845	3,937	1,123
September	320	417	3,877	1,134
October	867	648	3,951	1,181
November	876	557	4,273	1,063
December	783	914	4,277	1,157
1935				
January	1,199	854	4,393	1,026
February	970	580	4,719	672
March 1-16	543	892	4,447	943

The bulk of domestic production of cotton damask is made up by the manufacturers into table covers or napkins. The industry has concentrated largely on bleached white goods, but several manufacturers have been introducing some color in borders, and several of them now offer table covers and napkins in plaids and checks, made on dobby looms. The percentage of total production contributed by these latter manufacturers appears to be increasing.

Data at hand are not sufficient to establish the amount and character of seasonality in damask production.

Exports

Exports of cotton damask are comparatively small in relation to production, representing normally around 2 per cent. The principal markets have been Cuba, Canada, Colombia, and the Philippines. Our official classification of exports does not permit the gaurging of the volume of export of cotton damask manufactures. Table 3 indicates a substantial revival in the volume of exports of cotton damask piece goods during 1934.

Table 3. - Trends in exportation of cotton damask (piece goods conclusively) and in the ratios of exports to production and imports

	Quantity	Value	Unit value	Estimated poundage total 1/	Ratio of exp. to Domest. product. 2/	Ratio of exp. to Imports pc.gds. 3/
	1,000 sq.yds.	1,000 dollars	Cents per sq.yd.	1,000 lbs.	In percentage	
Years						
1927	372	$97	26.2	127	1.1	53
1928	780	213	27.3	267		126
1929	780	245	31.4	267	2.2	136
1930	506	141	27.8	175		152
1931	307	64	20.8	104	1.5	201
1932	310	51	16.5	106		435
1933	369	58	15.8	126	2.3	4707
1934	485	96	19.8	166		*
Recent quarters						
1932						
First	73	12	16.6	25	1.1	153
Second	34	10	28.4	12	.6	257
Third	96	16	16.3	34	2.8	961
Fourth	90	14	15.0	31	2.2	*
1933						
First	97	15	15.2	33	2.8	1488
Second	104	15	14.3	36	2.3	7934
Third	112	17	15.1	38	2.7	*
Fourth	56	12	20.7	20	1.5	*
1934						
First	93	19	20.6	32	2.0	*
Second	103	22	21.1	36	2.3	*
Third	120	24	20.0	41	4.8	*
Fourth	167	31	18.6	57	4.8	
1935						
First	109	19	17.4	37	3.9	*

* No imports recorded for these periods.

1/ Conversion from square yards to pounds effected on basis that one square yard of production averages, roughly, 0.342 pounds, in the light of Census returns.

2/ Annual ratios are based on production as reported by Census in square yards. Square yardage production for recent quarters has been estimated by applying a coefficient of 4.29 to the quarterly poundage production reported to us by seven important producers. The Census yardage production in 1933 was 427% of the aggregate poundage production reported to us for 1933 by these seven mills.

3/ Represents ratio of estimated export poundage to recorded import poundage.

Character and Scope of Foreign Competitive Industries

Flax was a popular material in the very earliest days of textile manufacture in Europe. Manufacture of linen tended to concentrate gradually in Belgium, Northern France and Germany, where conditions were more favorable for growing and retting the flax. Manufacture was extended in the early days to North Ireland, owing to an abundane of cheap female labor and owing to admirable conditions for grass bleaching.

Development of cotton manufacture was a serious blow to the long established linen industries, inasmuch as cotton is a fiber more easily separated into grades and prepared for spinning, and as it possesses the tensile strength essential with the use of high-speed machinery. Cotton manufacture was taken up extensively in Europe, spreading rapidly through North England and Scotland and in Germany, Netherlands, France and Bohemia. The Japanese industry is a more recent development.

Table 4 groups recent authoritative estimates for the present capacity of the linen and cotton industries in most of the countries from which competition is felt locally by the domestic damask industry. The figures in this table, of course, cover all mill equipment in these countries and not merely the equipment producing articles competitive with domestic damask.

Table 4. Reported capacity of foreign textile industries offering competition

	Spindles	Power looms
	In thousands	
North Ireland - linen	900	38
Czechoslovakia - linen	284	22
cotton	5,574	105
Belgium - linen	240	
France - linen	550	22
Netherlands - cotton	1,242	55
Japan - cotton	8,644	86

Manufacture in North Ireland is concentrated largely in the hands of about a dozen integrated companies which, after having built up a reputation for high quality damask some decades ago, have since settled down to production of those standard items year after year. As a result, the Ulster industry has been undisturbed by, or at least relatively unresponsive to, ever-changing vogues for table covers of novelty weave, design, and color. Their mill equipment is comparatively standardized and has required little replacement since the War. Wages are reported to have been increased generally about 10 per cent a year ago.

Before the War, the linen industry in Bohemia consisted of about twenty mills working primarily on good standard quality. There are now in Czechoslovakia about sixty factories, and practically all of the new

ones are concentrating on the manufacture of novelty cloths of fairly coarse weave. Most of the old factories are still active, principally on orders for shipment to contiguous countries. The cheap novelty products of the newer factories go chiefly to the United States. As the depression followed closely upon the era of capacity expension, most of the Czech mills are under bankers' control at present, according to reliable reports. Czechoslovakia has dealt harshly with attemtps of mills to exploit labor. The eight-hour day is prescribed generally. Wage scales in the linen weaving industry are reported to have been advanced roughly 10 per cent in September 1934. American Commercial Attache Sam Woods reports under date of November 8 that profits of numerous mills in Czechoslovakia suffered during 1934 as a result of commitments entered into before the currency devaluation of a year ago increased the cost of imported flax.

Linen manufacturers in Belgium have the advantage of local supply of the relatively best qualities of flax, and many of them have developed a reputation for fine goods. A few Belgian manufacturers took up the novelty cresh patterns after the War, but the present disparity in the value of Belgian and Czechoslovakian currencies has made it extremely difficult for the Belgian mills to meet the Czechoslovakian competition.

The Russian Five-Year Plan included the building up of linen spinning and weaving industries, a move which was quite natural in view of the fact that Russia, for a long time, had been the principal supplier of flax to the linen industries in other European centers. The Russian Government equipped itsfirst linen mills with second-hand machinery offered at decidedly bargain prices by the German and Belgian mills. Other mills now being completed, however, are equipped with quite modern spindles and looms. In developing its linen export business, Russia concentrated first on crash toweling. Prices on this item have been reduced to such a low level that this toweling is reported to be running away with the market in the United States as well as throughout most of Europe.

French linen table covers have not been a big factor in the American market since the War.

A few cotton manufacturers, principally in Czechoslovakia and Japan, introduced novelty color designs in plain woven cotton table covers and this has been responsible largely for their entry locally in competition with domestic damask.

The importance of the American market to certain branches of foreign textile industries can be gleaned from Table 5.

Table 5. - Importance of the American market to foreign competitive industries, expressed in ratios of exports to the United States to total exports

	1929	1931	1932	1933
	In percentages			
United Kingdom linen industry				
Plain-woven bleached piece goods	62	68	75	71
Damask piece goods	51	53	56	37
Damask manufactures	62	74	79	73
Czechoslovakian textile industries				
Plain-woven linen manufactures	*	81	87	87
Linen damask manufactures	*	56	62	54
Cotton manufactures - present type	*	9	13	21
Belgian Linen industry				
Plain-woven linen manufactures	*	*	*	50
Japanese cotton table cover industry				
Cotton table covers and napkins	*	17	17	22

* Not available.

Imports

Inasmuch as our official import classifications record imports of articles competitive with domestic cotton damask in different units of quantity, the relative importance of imports in the various groupings can be indicated only by comparison of value totals. Table 6 shows the trend in the value of imports annually since 1926 and quarterly for the past two years in each of the seven official classifications which complainants allege to embrace competitive items. It will be noted that combined import values of the four linen groups rose gradually to a peak in 1929; also that the combined value of the three cotton groups in 1934 surpassed the previous high, registered in 1926.

Table 6: Trends in total value of imports in the principal competitive groups; all in thousands of dollars

	Articles of linen				Cotton table covers & napkins			Value totals	
	Damask weave		Manufactures of flax n.s.p.f. 1/	Napkins of all weaves 2/	Table damask		Plain woven	Four linen groups	Three cotton groups
	Piece goods	Manufactures (ex. napkins)			Piece goods	All manufactures			
Tariff Para:	(1013)		(1023)	(1014)	(910)		(910-b)		
	By years								
1926		6,763	3,000	4,118	232	63	398	13,881	693
1927		6,653	3,159	4,029	225	74	294	13,841	593
1928	3/	3/	3/	3/	207	55	305	17,766	567
1929	3/	3/	3/	3/	179	185	313	18,025	677
1930	3/	3/	3/	3/	104	144	281	12,770	529
1931	393	2,550	2,343	2,185	38	141	187	7,471	366
1932	103	1,997	2,632	1,665	12	193	141	6,397	346
1933	90	1,838	1,781	1,533	1	234	508	5,242	743
1934	40	2,101	2,154	1,723	-	280	524	6,018	804
	By quarters								
1933									
Jan-Mar	18	335	444	298	1	33	77	1,095	111
Apr-June	7	331	358	281	-	56	151	977	207
Jul-Sept	36	540	488	437	-	75	180	1,501	255
Oct-Dec	30	631	491	517	-	70	100	1,669	170
1934									
Jan-Mar	13	514	524	406	-	64	171	1,457	235
Apr-June	8	413	374	330	-	75	112	1,125	187
Jul-Sept	13	593	624	480	-	59	119	1,710	178
Oct-Dec	7	580	631	507	-	81	122	1,725	203
1935									
Jan-Mar	12	413	510	410	-	49	104	1,445	183

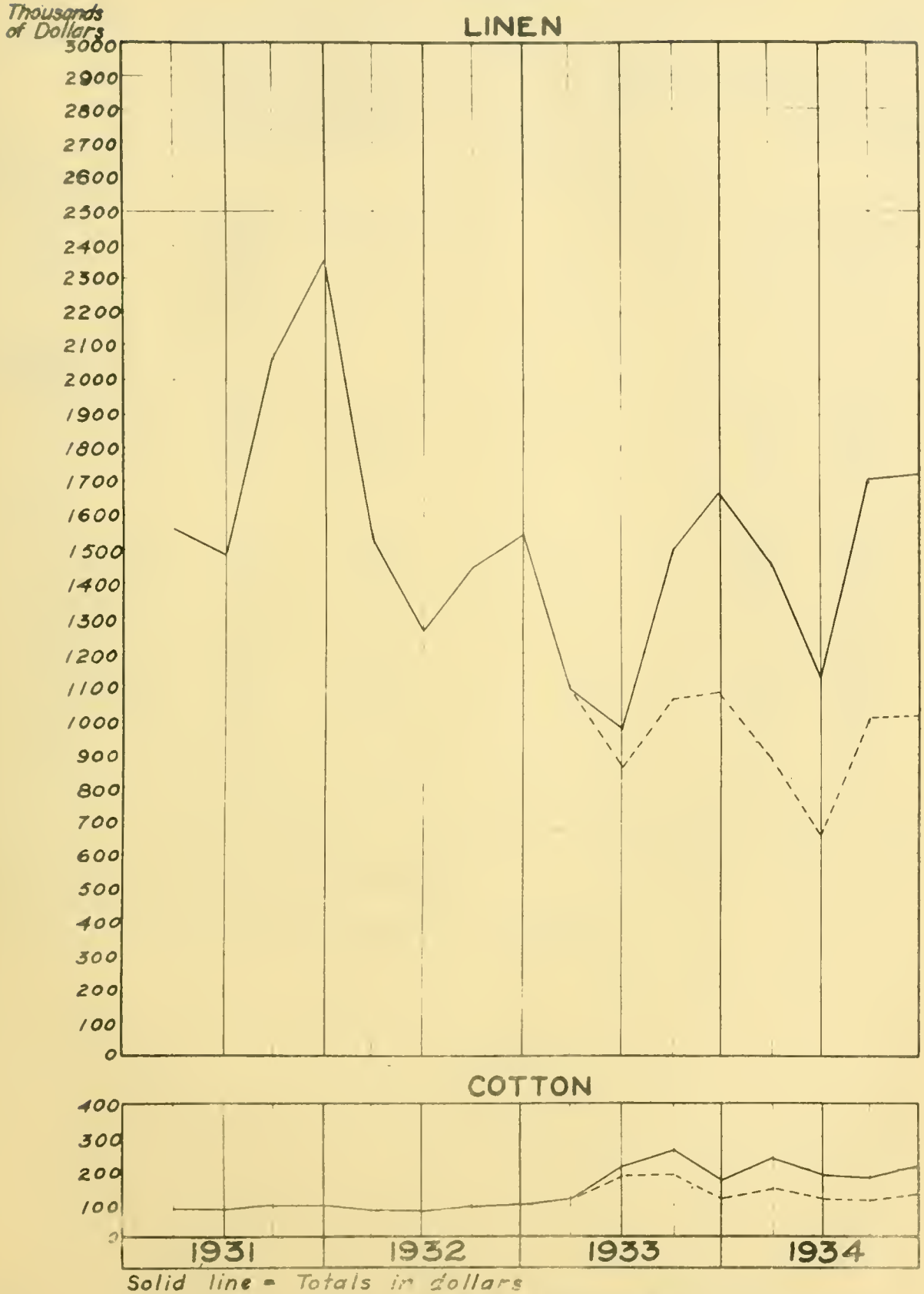
1/ Imports under Para. 1023 comprise a range of products, but predominantly plain woven table covers.
2/ Figures for years since 1930 relate exclusively to napkins, but for earlier years include a minor percentage of towels.
3/ Comparable data not available owing to temporary departure from usual class groupings.

The seasonal movement in the aggregate quarterly value of these four linen groups and three cotton groups during the past four years is presented graphically on the next page, based entirely on values as given in our official import statistics. The dotted lines breaking away from the solid lines after the first quarter of 1933, represent the aggregate value equivalent in gold dollars of the discontinued 25.8 grains gold content. Obviously the dotted line would more directly represent the real trend in import volume from countries whose currencies remained stable against gold during this interval. A study of the trend in unit values of exports from these foreign countries, as given in their official export statistics, would indicate that unit values, expressed in currencies which have remained stable against gold in most cases, have shown little change. This leads to the probability that the volume trend in our imports has actually more nearly followed the dotted line.

Import movement by principal classes and sources

Table 7 traces the trend during the past few years in the importation of linen table damask and manufactures, except napkins, from the principal countries of source. It will be noted that imports from Belgium are now comparatively insignificant in relation to the 1927 volume, and that imports of linen damask from Czechoslovakia have also declined considerably. North Ireland is shown to remain our chief source of linen damask. Attention is directed to the late start, but nevertheless rapid development, of importation of damask from Russia. The first damask received from Russia was of fairly simple design and usually the product of outmoded patterns. Importers are inclined to believe that damask competition will develop seriously from Russia within a few years, owing to the reports that Russia has recently been importing more modern jacquard patterns.

IMPORTS OF TABLE LINENS
(BY VALUE)



Solid line = Totals in dollars
Dotted line = Totals in dollars of previous full gold content
Basis for the solid line: Official U.S. Import Statistics.

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Table 7. - Imports of linen table damask and manufactures (except napkins), by principal countries of origin

	By principal countries of origin					Totals	
	United Kingdom (Ireland)	Czecho-Slovakia	Belgium	Russia	Germany 1/	Piece goods	Manufactures (except napkins)
	In thousands of pounds						
By years							
1927 1/	2,126	2,865	378	X	637	6,568	
1931	1,704	1,049	63	7	90	412	2,539
1932	1,775	911	23	1	38	150	2,617
1933	1,603	617	51	90	16	128	2,207
1934	1,350	715	33	144	*	48	2,311
By quarters							
1932							
Jan.-Mar.	444	271	5	X	*	38	703
Apr.-June	440	161	5	X	*	36	579
July-Sept.	394	218	10	*	*	39	597
Oct.-Dec.	498	261	8	*	*	38	739
1933							
Jan.-Mar.	353	163	8	1	*	35	468
Apr.-June	294	132	5	15	*	13	437
July-Sept.	444	203	6	48	*	46	634
Oct.-Dec.	512	149	12	25	*	34	668
1934							
Jan.-Mar.	367	144	5	43	*	16	544
Apr.-June	281	115	4	42	*	9	434
July-Sept.	367	225	8	39	*	15	635
Oct.-Dec.	334	229	16	20	*	8	599
1935							
Jan.-Mar.	252	155	7	28	*	16	427

1/ Data for 1927, and annually for Germany, represent general imports. All others are imports for consumption.
X = Not recorded.
* = Figures not available; presumably negligible.

Table 8 compares the trend through recent years in imports of linen napkins from each important country of source. Figures in this table are not directly comparable with the figures in the preceding table or in tables immediately following it, as napkin figures are given in number of napkins as against poundage shown for linen damask, and as against value for other competitive items in later tables.

Attention is directed to the steadiness of napkin import volume from North Ireland, Czechoslovakia and Belgium, and to the sharp increase in imports from Russia. Imports from Ireland and Belgium are chiefly damask, while those from Czechoslovakia are mostly crash or other plain weaves.

The two final columns in the table show separately the trend in the two classifications for napkins carried in our import statistics, the first now carrying ad Valorem duty rate or 40 per cent and the second carrying 55 per cent, for the reason that towels dutiable in this second tariff class are more nearly competitive with domestic manufactures. These two columns indicate that the import volume of coarse napkins has held up better than that of fine weave.

Table 8. - United States imports of linen napkins, by principal countries, and by type

	United Kingdom (Ireland)	Czecho-slovakia	Belgium	Russia	Total (All countries)	Thread count per square inch: Over 120 1/	Thread count per square inch: Not over 120 2/
	In thousands of napkins						
By years							
1931	7,595	15,885	812	34	26,740	17,326	9,414
1932	8,076	15,449	804	5	25,534	15,961	9,574
1933	6,913	12,907	930	98	21,579	12,484	9,115
1934	5,907	13,576	945	240	21,190	11,873	9,316
By quarters							
1932							
Jan.-Mar.	1,963	4,129	201		6,577	4,391	2,186
Apr.-June	2,109	4,307	202		6,178	3,284	1,894
July-Sept.	1,863	4,219	273	3	6,673	3,791	2,882
Oct.-Dec.	2,141	4,194	128	2	7,107	4,495	2,612
1933							
Jan.-Mar.	1,540	3,024	272	-	5,036	2,827	2,210
Apr.-June	1,358	3,052	244	-	4,785	2,586	2,199
July-Sept.	1,869	3,557	256	54	5,993	3,508	2,484
Oct.-Dec.	2,147	3,274	158	45	5,735	3,543	2,222
1934							
Jan.-Mar.	1,599	2,826	254	49	4,837	2,843	1,994
Apr.-June	1,236	2,086	301	144	3,797	2,265	1,532
July-Sept.	1,597	4,162	196	26	6,128	3,316	2,812
Oct.-Dec.	1,474	4,501	293	20	6,428	3,450	2,978
1935							
Jan.-Mar.	1,219	3,899	243	331	5,817	2,724	3,093

1/ Mostly damask weave.
2/ Mostly crash weave.

Imports of linen table coverings of weaves other than damask are not recorded separately in our official trade figures, but invoice analyses have revealed that they are the outstanding separate item entered under the basket classification "manufactures of flax, n.s.p.f." Table 9 traces the trend in dollar value of imports included in this basket classification from principal countries.

It will be noted that Czechoslovakia stands out as the principal supplier and that North Ireland has registered considerable gains, chiefly at the expense of Belgium. The increase shown for Czechoslovakia in 1934 can be discounted to some extent from the volume standpoint, taking into account the fact that the figures in this table are in units of dollars subject to devaluation during the past two years. This same consideration diminishes the significance of the increased total from all countries shown for 1934.

Table 9. - Imports of manufactures of flax, n.s.p.f., by principal countries (comprises chiefly linen table covers of weaves other than damask)

	United Kingdom	Czecho-slovakia	Belgium	Other countries	Total all Countries
			In thousands of dollars		
By years					
1931	297	1,533	256	255	2,343
1932	335	1,335	199	163	2,032
1933	261	1,148	144	128	1,781
1934	248	1,587	173	146	2,154
By quarters					
1932					
Jan.-Mar.	72	344	59	54	529
Apr.-June	102	234	46	38	420
July-Sept.	75	399	39	39	552
Oct.-Dec.	85	358	55	33	531
1932					
Jan.-Mar.	90	292	29	33	444
Apr.-June	77	219	38	24	358
July-Sept.	88	328	36	36	488
Oct.-Dec.	106	309	40	36	491
1934					
Jan.-Mar.	85	359	50	31	525
Apr.-June	59	253	37	25	374
July-Sept.	56	502	32	34	624
Oct.-Dec.	47	474	54	56	631
1935					
Jan.-Marc.	70	378	28	34	510

Imports of cotton table covers are set out in table 10: in dollar value, The final column of this table shows a sharp rise in the import value of plain woven items for 1933, and maintained in 1934. It will be noted that this sudden spurt developed in the Netherlands where it now appears to be on the wane. The New York representative of the consortium of Dutch mills declares that his gaily colored merchandise has not been able to maintain the popularity it developed in 1933 as a novelty, and that it is losing out in competition with cheaper merchandise from Japan. Imports from Japan are shown in the table to be rising rapidly.

Total imports of cotton table covers of damask weave are shown to have increased somewhat in value, though they continued to be less important than imports of plain weave. Czechoslovakia would appear to be holding its own as chief supplier of damask weave table covers composed principally of cotton. Imports from Czechoslovakia include novelty tinted items of mixed rayon and cotton, which were featured in many department stores during the Christmas season of 1934.

Table 10. - Imports in the principal cotton groups combining table covers and napkins, by countries

	Damask weave		Plain weave			Total imports	
	United Kingdom	Czecho-slovakia	Czecho-slovakia	Netherlands	Japan	Damask weave	Plain weave
	(Value in thousands of dollars)						
By years							
1931	17	99	32	0.5	64	141	187
1932	25	125	32	23	43	193	141
1933	44	153	59	304	104	234	508
1934	49	172	54	255	160	280	524
By quarters							
1932							
Jan.-Mar.	5	34	5	1	6	49	23
Apr.-June	5	29	9	.4	10	45	29
Jul.-Sept.	8	32	12	2	9	52	36
Oct.-Dec.	7	30	5	20	18	47	53
1933							
Jan.-Mar.	5	24	4	30	15	33	77
Apr.-June	11	37	16	104	22	56	151
Jul.-Sept.	15	45	24	110	34	75	180
Oct.-Dec.	13	46	15	40	32	70	100
1934							
Jan.-Mar.	10	38	13	105	40	64	171
Apr.-June	16	46	10	59	31	75	112
Jul.-Sept.	13	26	9	47	45	59	119
Oct.-Dec.	11	69	31	43	45	81	122
1935							
Jan.-Mar.	8	37	14	52	31	49	134

Trends in unit values of imports

Table 11, based on our official import statistics, traces the trend in unit value of imports of linen table damask both in the piece and made up into table covers, also the trend in unit value of linen napkins, both fine and coarse. It will be noted that unit values on linen damask piece goods have advanced since early 1933 in almost full ratio to dollar devaluation, but that the other items have advanced somewhat less.

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Table 11. - Trends in the import unit values of linen damask and linen napkins

	Linen damask		Linen napkins	
			Thread count per square inch	
	In the piece	Table covers	Over 120	Not over 120
	Cents per lb.		Cents per napkin	
By years			10.7	3.5
1931	95.3	100.4	8.6	3.0
1932	68.1	76.3	9.9	3.3
1933	70.6	83.3	11.5	3.8
1934	84.3	94.9		
By quarters				
1932				
July-Sept.	69.5	77.7	8.5	2.9
Oct.-Dec.	58.2	74.5	8.2	3.0
1933				
Jan.-Mar.	50.8	71.6	8.4	2.8
Apr.-June	52.5	75.7	8.5	2.8
July-Sept.	78.5	85.2	9.9	3.8
Oct.-Dec.	86.9	94.5	12.2	3.9
1934				
Jan.-Mar.	79.9	94.6	11.5	4.0
Apr.-June	89.5	95.3	11.9	4.0
July-Sept.	85.2	93.4	11.3	3.8
Oct.-Dec.	85.4	96.9	11.5	3.7
1935				
Jan.-Mar.	73.4	96.8	10.7	3.9
	In percentage increase since January-March, 1933			
1934				
January-March	57	32	37	43
July-September	68	30	35	36
October-December	68	35	37	32
1935				
January-March	44	25	27	39

The advance in unit value recorded for imports of important competitive items from individual countries of source are set out in Table 12 in the form of indices based on 100 representing the first quarter of 1933. The indices relating to these countries marked with an asterisk have been calculated from official export statistics for the countries concerned, the foreign values being converted to dollars at average dollar exchange for the quarter. Indices for linen damask items and for napkins are based on United States import statistics.

It will be noted that unit values (expressed in dollars) have increased more substantially on imports from Ireland a d Belgium than on imports from Czechoslovakia. The New York agent for the Dutch manufacturers of novelty cotton table covers has supplied data which would indicate that Dutch values have been cut considerably during the past year, presumably to meet competition from Japan.

Table 12. - Indices of trend in unit value of imports, by type and country, 1934

	Country of source	(Based on January-March, 1933- 100) First quarter	Second quarter	Third quarter	1935 First quarter
Linen products					
Damask piece goods	Ireland	154	171	167	144
Damask table covers	Ireland	142	150	146	145
	Czechoslovakia	124	115	119	132
	Russia	252	217	276	313
Napkins					
Fine	Ireland	141	149	150	142
	Czechoslovakia	112	125	114	124
	Belgium	127	159	157	196
Coarse	Ireland	194	140	137	209
	Czechoslovakia	143	152	148	133
	Belgium	140	148	148	148
Table covers - Plain-woven	Ireland*	167	165	163	
	Czechoslovakia*	148	129	131	
	Belgium*	144	167	162	
Cotton products					
Table covers - plain-woven	Czechoslovakia*	141	138	141	
	Netherlands**	150	127	120	
Table covers - weaves other than damask	Japan*	142	145	145	

* Estimates based on analysis of foreign unit values of exports to the United States.

** Based on dollar shipping values as reported by the factory representatives in New York of the consortium of Dutch mills.

Seasonality of imports

The seasonal movement in the importation of all items competitive with domestic cotton damask is portrayed in the graph appearing on page 17. In further evidence, Table 15 gives the ratio to total imports in each classification during the past four years, of imports during each quarter and each month of those four years.

Table 13. - Seasonality of imports of competitive groups during the four-year period 1931-1934, indicated by percentage ratios

	January-March	April-June	July-Sept.	October-December
	Ratio of quarterly imports to total imports			
Linen				
1) Damask piece goods	30	16	21	33
2) Table covers, etc., of damask	22	20	27	31
3) Table covers, etc., plain weave	24	20	28	28
4) Napkins, fine	24	20	26	30
5) Napkins, coarse	22	19	29	30
Simple average	24	19	26	31
Cotton table manufactures				
6) Damask	20	24	27	29
7) Plain-Woven	24	25	28	23
	Ratio of monthly imports to total imports			
Linen group (1)	11-9-10	9-4-3	7-8-6	9-6-18
Linen groups (2) (3) (4) (5)	8-8-8	7-7-6	7-9-11	11-10-8
Cotton groups (6) (7)	7-7-8	9-8-7	9-8-11	10-9-7

Note: Based on poundage for items (1) and (2); numbers for items (4) and (5); and value for items (3), (6), and (7).

Importance of customs districts in imports

The dominating position of New York as receiving point for competitive imports is revealed in Table 14. This shows that the New York customs district handles over 80 per cent of competitive items of linen, followed by Chicago. It shows also that Pacific Coast districts have risen substantially in importance as clearance points for competitive articles of cotton and that Chicago receipts have also increased. New York, nevertheless, continues to handle over 60 per cent of competitive imports of cotton.

Table 14. - Trends in the ratios of imports through each of the principal customs districts, to total imports of allegedly competitive items; i.e., damask piece goods and manufactures, and plain-woven table covers and napkins

(Per cent)

Customs district	Articles of linen			Articles of cotton			All competitive imports		
	1927	1929	1931	1927	1929	1931	1927	1929	1931
New York	79.	78.	81.	68.	78.	62.	77.	78.	77.
Chicago	8.	8.	7.	8.	7.	14.	8.	8.	8.4
Massachusetts	2.	2.4	2.2	1.5	1.4	1.	1.9	2.2	2.
Philadelphia	1.9	2.2	1.7	1.1	1.3	.2	1.7	2.	1.4
St. Louis	2.2	2.5	1.7	1.5	1.8	1.2	2.1	2.4	1.6
Los Angeles	.7	.8	1.2	2.7	3.5	6.	1.1	1.3	2.2
San Francisco	.8	.8	.9	9.5	3.2	7.	2.5	1.3	2.1
All other	5.4	5.3	4.3	7.7	3.8	8.6	5.7	4.8	5.3

Trend in Apparent Consumption

Table 15 gives a rough indication of the trend in apparent consumption of table covers and napkins of cotton and/or linen, merchandised either made up or in the piece. Apparent consumption in this case is gauged by adding the total dollar value of imports to the value of domestic production as reported by the Census Bureau. On this basis, consumption registered a peak in 1927, and thereafter dropped 68 per cent to a low in 1933.

The movement in relative importance of production and imports in apparent consumption over the period 1923-1927, as indicated in the two final columns in Table 16, was due partly to increased volume of imports, but also to a considerable extent to curtailment of domestic production. The ratio of imports to apparent consumption dropped substantially from 1927 to 1929, but it is shown to have been maintained at close to 68 per cent since 1929.

Table 15: Trends in the Ratios of Cotton Damask Production and Competitive Imports, to Apparent Consumption of Table Covers and Napkins, merchandised either made up or in piece; basis of value

	Domestic production value	Total value of imports	Apparent consumption (1) plus (2)	Ratios to apparent consumption	
				Domestic production	Imports
	(1)	(2)	(3)	(In percentage)	
1923	10,851	12,667	23,518	56	54
1925	12,450	11,457	23,907	52	48
1927	6,751	21,087	27,838	24	76
1929	8,383	18,702	27,085	31	69
1931	3,651	7,837	11,488	32	68
1933	2,837	5,985	8,822	32	68
1934 (est)	3,247	6,322	10,069	32	68
1st quarter 1935 (est)	990	1,628	2,618	38	62

Important Competitive Factors

The style element

Prior to the War, bleached damask of either linen or cotton enjoyed almost undisputed title in the field of table covers and napkins, owing primarily to dictates of fashion. Ascending the living scale, families moved invariably from oilcloth to plain cotton check and finally to white damask. It was the usual custom for housewives to have several qualities of the latter so as to be prepared for all occasions, ranging from family meals to formal dinner parties and receptions.

During and after the War, the table itself gradually emerged from obscurity with the rapid extension of the vogue for the use of individual doilies, centerpieces, and runners. Owing to the background afforded by the table, open-work designs including lace were found to be effective, thereby displacing damask to some extent from its former supremacy. Fashion during this transition period continued to call for white goods or unbleached linen or mildly tinted over-all color.

The next caprice in fashion for table covers was intimately bound up with the vogue for provincial dining rooms. Interior decorators decided that white table coverings produced an off-note in rustic settings inspired by Normandy, Brittany, etc., and they introduced color in table sets to harmonize with the peasant furnishings. Modernistic furniture also cried for color. Tho no longer a novelty per se, color in table linen continues to be considered decreed by numerous furniture backgrounds, and to be smart for a variety of occasions, regardless of the furniture type.

More or less coincident with the introduction of colored checks and plaids in table covers to harmonize with provincial furnishings, interior decorators introduced fringed crash table sets to more completely transplant the peasant atmosphere carried in the furniture and furnishings, and these peasant weaves soon achieved widespread popularity.

As a result of these changes in fashion during the past few years, the housewife's problem is more complex than it was when a series of white damask table sets ranging in quality, would suffice for all occasions. Now, if the family budget permits, she will aspire to the following range of items in her linen closet; (1) Several white table sets of damask or cut-out embroidery for family or informal dinners; (2) A double damask table cloth of elaborate pattern, and probably also a lace table covering for formal dinners, the lace cloth serving also for formal afternoon receptions; (3) A damask or crash set either bordered or otherwise patterned with subdued coloring for informal Sunday night supper; (4) Several crash table coverings or doily sets in gay colors for the breakfast room, and one of these will probably be of red and white check to go on the self-service table for evening entertainment, particularly if refreshments are to include beer; (5) A heavily laced cloth for formal luncheons, and a "dernie cri" novelty set for less formal luncheons for women; (6) Linen bridge sets either

embroidered or appliqued on solid color.

Repeal, more than any other single factor, may be held responsible for the returning popularity of all-over tints, inasmuch as these have been found to be the most effective backgrounds for the serving of table wines. Repeal also resulted in the mushroom development, not of the old type bar room, but rather of arty cocktail bars, rathskellers, etc. Here the continental atmosphere was copied, usually to the extent of furnishings in gaily colored checks, plaids, etc.

As novelty table sets have become popular for numerous household purposes, the damask trade has become more dependent on the hotel and restaurant group of consumers. Defection from this group has been pretty well confined, up to the present, to tea rooms and rathskellers, but some hotels have compromised to the extent of setting up, alongside of their main dining rooms, a gaily furnished and more speedily serviced "Deauville Coffee Shop" or "Valencia Patio."

A considerable portion of the pioneering in novelty linens originates with interior decorators and with buyers for department stores. These buyers are ever on the alert to sense the trend in popularity of types, patterns and color effects, and they try constantly to introduce an item ahead of rival establishments. They make a regular practice of visiting mills in European centers and consequently exert considerable influence in the inspiring of novelties. As a result there is some basis to a buyer's matter-of-fact statement that the public, six months hence, will be giving preference to, say heavier bandings, larger checks, and more tones of brown. It is almost certain, however, that he will have a quite different prediction for the future, by the time the retail customers are confirming his previous prediction.

Response of competitive industries to dictates of fashion

From the moment housewives became novelty-conscious in table covers, the domestic sales volume of an individual manufacturer of these novelty items has been somewhat dependent upon his agility in keeping up with or ahead of these popularity trends. Domestic cotton damask manufacturers have responded to the call for colorings to the extent of weaving a mildly colored border in some of their items. Several domestic mills are also using dobby looms to turn out gaily colored checks, plaids, etc.

Asserting that the weaving of color in damask is tantamount to "gilding the lily", most of the Irish linen damask manufacturers have maintained production of their old standard qualities carefully bleached, but a few have compromised to the extent of adding new items to their line, designated in the trade as promotion cloths, made up of somewhat yarns and frequently containing a bit of color in the border. On the other hand, the vogue for peasant cloths developed in a period when the Czeckoslovakian linen industry was in process of growth, and many of the newer mills are equipped to specialize in crash and color weaves. Several mills in Belgium took up crash and color weaves some years ago, but most of them have gone back to their old standard items, after an attempt

to compete on the crash novelty goods with Czechoslovakia. Russian table linen offerings commenced with damask. It is reported, however, that some of the new Russian mills are equipped for crash and color weaves.

The importing of Irish table damask into the United States is in the hands of a comparatively small number of firms, many of them branch sales offices of the Irish manufacturer. The sales approach of these branch offices tends to take the form: "You know our good old standard lines. Here's our schedule of quotations. What do you wish?" In contrast, agents in New York for Czechoslovakian Mills approach important customers in the following manner: "We are sales representatives for the _____ Mill in Czechoslovakia, which is large and equipped with modern looms. This display indicates the range of items it has been turning out recently. Tell us what you have in mind to purchase this season so far as pattern and color are concerned, and we will lay the matter before our mill and we will let you know later what they can quote."

Czechoslovakian cotton mills got an early start in the meeting of local demand for dobby-woven table sets of novelty pattern and coloring. A group of Dutch mills undertook an intensive sales campaign two years ago on cotton table covers of comparatively plain weave but highly colored, quoting unusually attractive prices. This campaign produced a good business volume but apparently a minimum of profit considering the trend in volume of recent shipments.

Household storage practices.

When hope chests were a commonplace but very serious family institution in the United States, a large set of table damask was usually one of the first items to go into the chest, followed later on by one or more less pretentious sets. This took hundreds of tons of damask off store shelves and, at least temporarily, out of circulation. The original fine damask in hope chests of many a bride of the pre-War days is now gracing the table for family celebration of her daughter's engagement .

The probability of this daughter's having inherited and retained her mother's zeal for hope chest accumulation would depend on habitat and interests. It would be very small if she had taken up some profession and if she had moved from home to independent urban quarters. During the years of hope chest linen accumulation by a daughter now attaining marriageable age, she might have been tempted frequently to purchase novelty table sets; nevertheless she probably resisted temptation in most cases and kept her fund for novelties intact pending settlement on such matters as marriage date and home furniture. When these matters are later settled and when she sets out to purchase her novelty linens, she will give relatively less consideration to durability and more to price if she aspires to keep up with constant changes in novelty vogues; but her damask purchases will still be made with an eye to durability and quality, as a long term investment.

If the bride-to-be is faced with the prospect of living in an apartment, she will not think in dozens as her mother probably did when purchasing table linen. She may have to cope not only with small and inconvenient storing space for linen, but with physical limitation to the number of dinner guests.

Respective qualities of linen and cotton in table covers

Linen damask is normally valued at a considerable premium over standard cotton damask, owing to its relatively greater wearing qualities, resistence to present day laundering methods, and permanency of sheen produced by ironing. Standard cotton damask not only rates lower in the above qualities, but lacks the "body" and elasticity demonstrated by linen after ironing and storage. The lint of cotton covers demonstrates an affinity for wool suitings.

With a view to overcoming these defects, several domestic manufacturers of cotton damask subject their fabric to special beetling and other patented finishings, which result in the securing of a product closely resembling linen damask and retaining most of its special properties.

In view of these superior qualities of linen, standard cotton damask has never been able to compete with standard linen damask under conditions of purity prices. The amount of necessary price differential is cut down somewhat but not entirely by the subjecting of cotton to patented finishing processess. One of the complainant mills described linen damask as "made of costlier staple, in higher constructions as a luxury product," and cotton damask as "made of a cheaper staple, generally in lower qualities for people who could not afford linens."

Modifications in type and fiber quality of table linen manufacture

In preceeding to a discussion of the competitive situation, this complainant adds that "during the last several years, this has been changing and the foreign manufacturer, with labor cheaper than ever and flax cheaper than ever, has seen the opportunity to obtain the low and table cloth business here as well as the high and business, and by also using cheaper weaves and cheaper constructions, has been able to flood the American market with so-called all-linen table cloths in direct competition with cotton table cloths. The most serious competitor has been the linen crash table cloth."

It is indeed a fact that numerous Continental linen mills, particularly in Czechoslovakia, are concerntrating now on cheaper constructions and weaves to cater to the market for peasant cloths in novelty patterns which are now favored for harmony with rustic furnishings. So far as damask is concerned, however, wholesale dealers and department store buyers report that, while plenty of foreign linen damask manufacturers have added one or more promotion cloth items to their line, practically all of the damask weavers in North Ireland and Belgium, and most of those in Czechoslovakia have refrained from debasing the quality of their standard items. The it does not lead to any conclusions specifically on table covers, Table 16 gives a general indication of the trends in proportional use of flax and tow by the linen industries in North Ireland and Czechoslovakia. Crash table

cover production undoubtedly contributed to the increasing and relatively greater use of tow in the latter country, and promotion cloths were responsible in part for the increased use of tow in North Ireland.

Table 16 - Trends in quality of fiber imported for the linen industries of the United Kingdom and Czechoslovakia

	Imports into the United Kingdom			Imports into Czechoslovakia		
	Flax (1)	Tow (2)	Ratio of (2) to (1)	Flax (1)	Tow (2)	Ratio of (2) to (1)
	Thousands of tons		Per Cent	Thousands of tons		Per cent
1913	84.0	18.4	22	x	x	x
1930	x	x	x	11.8	5.3	45
1931	28.9	14.3	49	5.6	5.3	93
1932	30.9	17.8	58	10.2	6.6	64
1933	29.0	22.7	81	4.2	6.3	149
1934 (9 months)	27.9	21.3	76	9.5	9.3	98

x indicates that data are not available.

Table 17 indicates the changes which have occurred during recent years in dependence of the linen industries in North Ireland and Czechoslovakia on various sources for their raw material; it also shows the relative price level each year on material secured from these different sources. As sources of supply for the Irish industry, Russia is shown to be returning rapidly to the importance it occupied before the War. Since 1931 Irish manufacturers have been drawing more of their Russian grades direct and purchasing a lesser quantity of Russian grades from shippers in Baltic countries, despite the fact that the imports direct from Russia show an increasing differential in unit value over imports from the Baltic countries. Irish manufacturers are shown also to be depending more upon Belgium than they were before the War. The unit value of imports from Belgium is shown to have remained fairly constant in sterling at a level very high in relation to imports from other sources.

Czechoslovakian mills are also shown to have increased their direct takings from Russia, particularly takings of tow, thereby placing a smaller volume of orders in Germany and Poland, although unit volume of imports from these latter countries continue lower than unit volume for Russian shipments. Czechoslovakian mills take comparatively little of the high-quality Belgian flax.

Table 17 - Trends in sources and costs of imports of flax and tow into the United Kingdom and Czechoslovakia

Year and sources	Imports into the United Kingdom				Imports into Czechoslovakia			
	Ratio to combined imports during year		Unit value per ton		Ratio to combined imports during year		Unit value per kilo	
	Flax	Tow	Flax	Tow	Flax	Tow	Flax	Tow
	Per cent		£ Sterling		Per cent		Kroner	
1913								
Russia	67	13	41	37				
Northeastern Europe 1/	x	x	x	x				
Belgium	14	4	89	17				
1931								
U.S.S.R.	8	6	37	23	13	11	5.0	3.6
Northeastern Europe	28	23	36	22	34	33	4.8	3.1
Belgium	28	2	81	34	2	-	12.7	-
1932								
U.S.S.R.	17	22	43	28	16	3	4.3	3.6
Northeastern Europe	20	11	41	30	41	34	4.3	3.1
Belgium	23	2	76	26	2	-	9.5	-
1933								
U.S.S.R.	11	34	51	31	11	26	5.6	3.2
Northeastern Europe	11	6	46	34	24	30	5.1	3.2
Belgium	29	3	81	28	1	-	11.2	-
1934 (9 months)								
U.S.S.R.	20	36	50	27	18	29	5.4	3.4
Northeastern Europe	x	x	45	33	26	18	5.3	3.3
Belgium	23	x	80	x	3	-	9.2	-

1/ Comprises Baltic Countires, Poland, and Germany, and includes a considerable percentage of transshipments originating in U.S.S.R.

NOTE: In place of figures (x) is used when data are lacking;
(-) is used when imports were nil or insignificant.

Table 18 indicates the manner in which unit volume of Irish and Czechoslovakian imports of flax and tow have moved during the past four years in relation to quotations on Slanetz flax and Rallo tow, those latter being Russian grades so important in the trade as to strongly influence the price trends for all other grades in world markets. This given some support to the claim of linen importers that manufacturers in North Ireland and Czechoslovakia have not moved over generally to use of relatively poor fiber. In the case of British imports, where unit values would appear to have failed to keep up with the rise in Slazetz quotations, it is believed that the unit value for the base period was influenced abnormally by heavy imports from Belgium at an unusually heavy premium over Russian qualities.

Table 18 - Trends in unit volume of imports of flax and tow into Ireland and Czechoslovakia, measured against trends in the prices quoted to those countries on standard Russian grades of flax and tow 1/

(Indices of trend, based on January-June, 1931 = 100)

Period	U.K. (North Ireland)				Czechoslovakia			
	Flax		Tow		Flax		Tow	
	Quotation Slanetz	Unit value of imports	Quotation Rallo	Unit value of imports	Quotation Slanetz	Unit Value of imports	Quotation Rallo	Unit value of imports
1931								
Jan.-Mar.)	100	100	100	100	100	100	100	100
Apr.-June)								
July-Sept.	100	89	102	97	98	102	98	100
Oct.-Dec.	103	78	114	119	78	87	86	100
1932								
Jan.-Mar.	113	85	111	124	81	79	80	88
Apr.-June	123	96	117	130	93	82	89	103
July-Sept.	113	87	126	136	81	83	89	99
Oct.-Dec.	130	104	138	139	88	93	95	97
1933								
Jan.-Mar.	147	103	111	153	102	109	77	102
Apr.-June	147	109	92	150	98	109	62	104
July-Sept.	132	120	85	137	88	103	55	101
Oct.-Dec.	118	108	71	120	78	95	46	86
1934								
Jan.-Mar.	137	97	98	117	93	87	65	86
Apr.-June	152	109	111	131	115	108	80	103
July-Sept.	176	113	123	138	130	123	99	124
Oct.-Dec.	196		185		142		132	

1/ Price quotations as reported in Linen Trade Circular; in Sterling for Ireland and in gold sterling for Czechoslovakia until the Czechoslovakian crown was devaluated in early 1934.

Cost spread between damask and crash.

While linen crash fabrics can be turned out by relatively high-speed mechanical equipment involving a minimum of labor, linen damask manufacture is a complicated process, permitting relatively very small output per day. Damask manufacture must also absorb the high cost of designing and pattern-making for the jacquard looms. Furthermore, the finishing and bleaching of damask are very substantial cost items.

The price differential permissible between linen damask and crash manufactures is indicated in Table 19, which tabulates production costs for various linen manufactures in North Ireland as estimated by Mr. Thomas Woodhouse, author of several technical volumes rated highly by the British textile industries. Mr. Woodhouse's cost study points to the probability that crash table covers can be offered profitably at one-half the price level for good quality damask. It will be noted that for twilled sacking, the cost of weaving labor represents 6 per cent, finishing 2 per cent and yarns 87 per cent of total costs. Wearing labor for damask represents 17 per cent of total cost, finishing 9 per cent, and yarns only 55 per cent.

Table 19 - Production costs for linen fabrics in North Ireland, as estimated by Thomas Woodhouse in 1931 (excluding interest on investment)

(Per square yard)

	Individual costs			Total cost	
	Yarns	Weaving labor	Finishing	Pence	U. S. cents 1/
	Pence				
11 Porter; 40 inch Hessian 10½ oz., 13 shots per inch	1.53	0.17	0.08	1.95	3.69
10 Porter, 45 inch Tarpaulin 20 oz., D. W. 12½ shots	3.55	.18	.06	2.98	5.63
10 Porter 28 inch Twilled Sacking 20 oz. 10½ shots	2.47	.16	.06	2.84	5.37
12 Porter, Imitation Tapestry 36", 14 shots	5.65	.72	2/	7.27	13.74
34 Porter, 27 inch Tent Duck 38 shots per inch	6.25	.50	2/	7.25	13.70
24 inch checked union glass cloth 40" scale, 10 shots per glass	3.00	.64	2/	4.31	8.15
27 inch union huckeback bleached, 55 shots	5.20	.65	2/	6.71	12.68
72 inch Damask, 1200 Reed 40" scale, 3 threads per split, 27 shots, bleached	8.51	2.60	1.38	15.47	29.24

1/ Conversion at average exchange for 1931, One pence = 1.89 cents.
2/ Not segregated from administrative expense.

False labeling as to measure and fiber content

Complainants allege that they have suffered from unfair competition in connection with the frequent occurence of improper labeling of imports, as to measure and fiber content. Complainants submitted samples of imported table covers which actually fail by as much as 10 per cent to meet the square yardage indicated in the label, and which are not actually of pure linen as inferred in the label.

These two practices have now been outlawed or at least largely restricted by the Code of Fair Competition for the linen Importing Trade, signed November 22, 1934. Unfair trade practices cited in the code include the following:

> A. No linen importer shall mark goods, or sell or distribute goods which are marked, in such a way as to vary more than two per cent (2%) in the case of staple and apparel linens, or three per cent (3%) in the case of fancy linens, from the finished size in either length or width. Any merchandise remaining in warehouse or in stock on the effective date of this Supplementary Code either must be re-marked, or the correct finished size, in accordance with this provision, must be directed to the attention of the buyer and the confirmation of the order must be marked accordingly. The merchandise shall be so invoiced.
>
> B. The use of the terms "linen," "pure linen," and "all linen" and terms of similar import shall be limited solely to articles the basic fabric of which has a linen content of ninety-five per cent (95%) or more in weight. No article the basic fabric of which contains less than five per cent (5%) of linen by weight shall be labeled, marked, branded, stamped, characterized, or named with the word "linen" in any form. Articles the basic fabric of which contains between five per cent (5%) and ninety-five per cent (95%) in weight of linen content shall be so labeled as to indicate the exact linen content expressed in perdentage of weight, such figures to be printed in the same size type as the word "linen." The above limitations shall also apply in the case of fabrics.

Price movements

Table 20 traces the trend in prices of baled cotton and hackled flax during the past nine years and during quarters of the past four years. Cotton prices are given not only on a dollar basis, but on a gold basis, so as to indicate the trend in cost of cotton to manufacturers in countries still remaining on a gold basis; similarly, flax prices are given on both sterling basis and gold basis, the former to indicate the trend in cost to North Irish manufacturers, and the latter to show the trend in cost to manufacturers in gold countries.

It will be noted that cotton reached a low point in 1932 and flax in 1932 on sterling basis and 1933 on gold basis; also that

Cost spread between damask and crash

While linen crash fabrics can be turned out by relatively high-speed mechanical equipment involving a minimum of labor, linen damask manufacture is a complicated process, permitting relatively very small output per day. Damask manufacture must also absorb the high cost of designing and pattern-making for the jacquard looms. Furthermore, the finishing and bleaching of damask are very substantial cost items.

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>
> B. The use of the terms "linen," "pure linen," and "all linen" and terms of similar import shall be limited solely to articles the basic fabric of which has a linen content of ninety-five per cent (95%) or more in weight. No article the basic fabric of which contains less than five per cent (5%) of linen by weight shall be labeled, marked, branded, stamped, characterized, or named with the word "linen" in any form. Articles the basic fabric of which contains between five per cent (5%) and ninety-five per cent (95%) in weight of linen content shall be so labeled as to indicate the exact linen content expressed in percentage of weight, such figures to be printed in the same size type as the word "linen." The above limitations shall also apply in the case of fabrics.

Price movements

Table 20 traces the trend in prices of baled cotton and hackled flax during the past nine years and during quarters of the past four years. Cotton prices are given not only on a dollar basis, but on a gold basis, so as to indicate the trend in cost of cotton to manufacturers in countries still remaining on a gold basis; similarly, flax prices are given on both sterling basis and gold basis, the former to indicate the trend in cost to North Irish manufacturers, and the latter to show the trend in cost to manufacturers in gold countries.

It will be noted that cotton reached a low point in 1932 and flax in 1932 on sterling basis and 1933 on gold basis; also that

the drop in flax was not as pronounced as in cotton.

The lower portion of Table 20 reveals that flax has increased 96 per cent in sterling and 18 per cent in gold since early 1931 and that cotton is up 26 per cent in dollars and down 26 per cent in gold since early 1931.

Table 20: Indices of price trends of baled cotton and hackled flax

	Baled cotton New York 1/		Hackled flax	
	Dollars	Gold dollars	Sterling basis	Gold basis
	Indices of annual average price based on 1926 = 100		2/	
1926	100		100	
1927	100		82	
1928	114		127	
1929	109		107	
1930	77		83	
1931	49		68	63
1932	37		79	57
1933	50	39	87	61
1934	70	42		
	Indices of quarterly average price based on January-June, 1931 = 100		3/	
1931				
First	100		100	
Second				
Third	76		100	98
Fourth	63		103	78
1932				
First	66		113	81
Second	56		123	93
Third	69		113	81
Fourth	61		130	88
1933				
First	63	63	147	102
Second	83	73	147	98
Third	99	70	132	88
Fourth	99	64	118	78
1934				
First	119	73	137	88
Second	118	70	152	96
Third	126	74	176	108
Fourth	126	74	196	118

1/ As recorded by the Bureau of Labor Statistics.
2/ Annual flax prices for 1926-1933 based on unit values of United States imports.
3/ Average quarterly flax prices based on Russian quotations for Slanetz grade.

Table 21 which compares the trend in prices of cotton table damask with the trend in prices on other important items of domestic cotton manufacture over the past nine years, indicates that cotton damask prices have held up much better than the average for all cotton goods and better than the price of other important items, altho the upward trend in price of gingham and duck has recently overtaken the price trend of damask.

The lower section of Table 21 on the other hand, indicates that the price advance since early 1933 has been less in damask, relatively, than in the general cotton average, and than in any of the other individual items shown.

Table 22 compares the trend in prices as recorded by the Bureau of Labor Statistics during the past nine years for linen damask table covers and for cotton damask piece goods. The final column of this table, giving the ratio of cotton damask price to linen damask price indicates that the spread between the two has decreased somewhat, tho not substantially. Prices as recorded by the Bureau of Labor Statistics are supported in other columns of the tabulation by an indication of unit values over this period for linen damask imports and cotton damask exports.

With the exception of two colums which give B. L. S. prices for comparison purposes, Table 23 is based entirely on prices reported by complainant mills. The table indicates the trend in prices of domestic cotton damask, both in the piece and made up into table covers, in the form of indices based on 100 equalling the average quotations offered during the period January-April, 1933. It shows that cotton damask piece goods quotations have been increased by various of these seven mills in amounts ranging from zero to 73 per cent, and that the simple average of the different price increases was 42 per cent, excluding consideration of the processing tax, and 53 per cent with the processing tax taken into account. The range of increases and the simple average of increases in prices on damask table covers are shown to have been somewhat less. The product showing the minimum price increase in the group was of mixed cotton and rayon.

Table 21 - Trends in wholesale price indices of baled cotton and significant cotton manufactures, as recorded by the Bureau of Labor Statistics

	Cotton baled, New York: Index	All cotton goods: 66 x 56 damask: 58"	Table damask: 128 x 68: 36"	Bleached mercerized broadcloth: 64 x 64: 10/4	Bleached sheeting Series 1: 6.37 yds. per lb.: 27"	Gingham: per lb.: 36"	Duck, wide
Indices of annual average price based on 1926 average price = 100							
1926	100	100	100	100	100	100	100
1927	100	97	96	x	93	94	106
1928	114	100	100	x	99	101	118
1929	109	99	100	x	101	105	117
1930	77	85	100	77	87	83	104
1931	49	66	91	65	68	59	87
1932	37	54	79	46	51	55	69
1933	50	71	86	57	63	77	83
1934	70	87	103	64	73	104	103
Average quotation, cents per yard, January-March, 1933							
	6.43 (per lb.)	-	28.6	8.4	18.5	6.1	23.2
Indices of price trends based on January-March, 1933 = 100							
1933							
Jan.-March	100	100	100	100	100	100	100
April	107	102	92	101	103	98	100
May	134	116	95	113	110	102	118
June	149	135	99	145	139	103	137
July	168	161	115	182	158	x	156
August	149	188	127	202	178	148	175
September	151	184	128	190	181	148	169
December	154	172	128	163	168	148	167
1934							
January	176	174	128	168	168	148	174
April	185	177	135	167	168	152	191
July	201	171	135	156	157	152	189
October	194	174	135	165	165	156	189
November	196	170	135	158	157	156	189

x = no quotation

TABLE 22

Comparison of Price Trends in Linen and Cotton Damask.

	Imports of Linen Damask piece goods and Table covers			B. L. S. wholesale price recordings 3/		Cotton damask piece goods exports	Ratio of (5) to (4)
	Unit Value		Average importers' sales level 2/	Linen damask table covers	Cotton damask piece goods	(Unit value)	(In percentage)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	¢ per lb.	----------	Cents per square yard	----------			
1926	118	46	86	91	23	35	25
1927	108	42	78	92	22	26	24
1928	*	*	*	92	23	27	25
1929	*	*	*	90	23	31	26
1930	116	45	88	84	23	28	27
1931	100	39	75	74	21	21	28
1932	73	28	55	59	18	17	31
1933	83	32	62	65	20	16	31
1934							

1/ On arbitrary basis of 2.56 square yards per average pound of imports.
2/ Charges, based on statements of several importers, include duty, transportation, insurance, handling and importers' commission. These charges, excluding duty, are reported to average roughly 33 percent of unit values plus duty.
3/ Wholesale prices recorded by the Bureau of Labor Statistics.
* No comparable basis offered by official statistics.

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Table 23 - Indices of trend in prices of domestic cotton damask, based on average for January-April 1933 = 100

	Cotton damask in the piece				Cotton damask table covers			
	Range of individual price indices 1/: Mills showing Low-High	Simple average of price indices of six products 1/		B.L.S. wholesale price 2/	Range of individual price indices 1/: Mills showing Low - high	Simple average of price indices of six products 1/		B.L.S. wholesale price 2/
		Processing tax: Excluded		Included		Processing tax: Excluded		Included
1926 (Ave.)				133				150
1929 (April)	75 193	143	143	133	88 158	123	123	145
1932 (July)	71 118	94	94	105	93 103	100	100	100
1933 (Jan-Apr)	100 100	100	100	100	100 100	100	100	100
1933								
July	100 185	129	129	119	100 127	112	112	109
Aug.	100 168	135	146	131	110 158	126	135	131
Sept.	100 168	138	149	132	111 158	128	137	131
Nov.	100 162	136	147	132	111 153	130	139	131
1934								
Feb.	96 162	142	152	133	113 158	130	139	131
May	96 167	143	153	138	108 165	133	142	137
Aug.	96 167	139	150	138	108 165	135	144	137
Dec.	96 173	142	153	158	108 166	135	144	137

1/ Based on price data reported by six manufacturers. An index of trend was computed separately for the product of each manufacturer and then a simple average was taken of the six indices for each month.

2/ Prices on a standard item recorded by the Bureau of Labor Statistics.

Fluctuation in currency values

Table 24 traces the trend in the exchange value of currencies of countries concerned in this complaint. The upper section of this table indicates that Belgium and the Netherlands have refrained from devaluating their currencies, but that the pound sterling has dropped off 40 per cent in gold value since a start in early 1931; that the Czechoslovakian crown has dropped 16 per cent since a start early last year, and that the dollar has dropped off 41 per cent since early 1933, while the Japanese yen has dropped gradually away from gold since late 1931 to the lowest point of all at present.

The final section of the table shows the percentage increase which has taken place in the dollar exchange value of these foreign currencies since January, 1933. These percentages represent the degree to which dollar devaluation would have impeded imports from each of these countries under level conditions of producing and shipping expense in original currency since the base period.

Table 34. - Course of fluctuations in the currencies of the United States and certain foreign countries

	United States	Ireland	Czecho-slovakia	Belgium	Nether-lands	Japan
	Dollar	Sterling	Crown	Belga	Florin	Yen
	Indices of trend in gold exchange value, based on 100 = currency's par					
1929 - average	100	100	100	100	100	92
1930 - average	100	100	100	100	100	99
1931 - July	100	100	100	100	100	99
October	100	80	100	100	100	99
1932 - January	100	70	100	100	100	72
April	100	77	100	100	100	66
July	100	73	100	100	100	55
October	100	70	100	100	100	46
1933 - January	100	69	100	100	100	42
April	96	70	100	100	100	42
July	72	69	100	100	100	41
October	67	65	100	100	100	38
1934 - January	63	65	100	100	100	38
April	59	63	83	100	100	36
July	59	62	83	100	100	36
October	59	60	84	100	100	35
December	59	60	84	100	100	34
	Dollar exchange quotations for these currencies.					
1931 - January		$4.85	$0.0296	$0.139	$0.402	$0.494
1932 - January		3.43	.0296	.139	.402	.360
1932 - January		3.36	.0296	.139	.402	.207
April		3.58	.0312	.163	.420	.221
July		4.65	.0416	.195	.562	.288
October		4.67	.0442	.207	.600	.278
1934 - January		5.05	.0470	.220	.636	.301
October		5.00	.0411	.237	.686	.298
December		4.95	.0418	.234	.676	.288
	Percentage increase in dollar exchange value since January, 1933					
		47%	41%	68%	68%	39%

The Domestic Labor Situation

Table 25 is based entirely on data supplied by four of the most important mills supporting the complaint. In the upper section of the table, a composite picture is given of labor use and labor cost in these four mills, showing the trend over spaced intervals running back to 1932. The three lower sections of the table are devoted to indices of trend based on 100 equalling the average for January, April, and July, 1933. The final section shows the range (and the section just previous the simple average), of indices of trend calculated separately for each mill. The indices based on composite data of the four mills show that since early 1933, the number of workers had increased 10 per cent in July, 1934, the Aggregate payroll 6 per cent, the average output per man-hour 13 per cent, and payroll per man-hour 37 per cent, but that output had dropped 14 per cent and man-hours of employment 22 per cent.

Table 25. - Composite Employment and Payroll Statistics - Four Mills

Period	Plant output	Number of Workers	Payroll	Man-hours	Average output per man-hour	Pay-roll per man-hour
	Pounds				Pounds	Cents
1932 - January	76,886	644	$9,281	31,358	2.45	29.6
1933 - January	57,528	545	6,979	25,744	2.33	27.1
April	45,062	639	8,224	27,063	1.67	30.4
July	82,588	726	9,954	36,340	2.27	27.4
October	68,453	728	10,606	29,277	2.34	36.2
1934 January	63,163	790	10,523	30,145	2.10	34.9
April	66,656	836	11,272	30,158	2.21	37.4
July	52,939	703	8,918	23,036	2.30	38.7
Indices of Trend based on 100= average of January, April and July, 1933.						
(Based on composite employment and payroll data.)						
1933 - October	111	114	126	99	113	128
1934 - January	102	124	125	101	102	123
April	108	131	134	101	107	132
July	86	110	106	78	112	137
(Simple average of indices of trend calculated separately for each mill 1/)						
1933 - October	110	121	146	104	105	140
1934 - January	101	109	133	92	131	150
April	109	125	143	100	129	145
July	79	98	97	75	129	105
(Based on separate analysis of each of the four mills, showing the range in indices for the four mills.)						
1933 - October	85-138	103-135	117-177	86-121	90-124	108-178
1934 - January	62-137	69-176	91-176	56-179	73-240	96-179
April	75-135	56-178	77-234	50-157	83-221	104-179
July	X-148	X-171	X-189	X-159	X-190	X-155

1/ Indices were taken separately for each of four mills. This group index is the simple average of the four individual indices (of 3 mills when one was closed).
X- indicates that one mill was closed.

Table 26 indicates the degree to which operation under the code affected the importance of individual cost items in total production costs, showing in each case the range as well as the simple average of ratios in the group of products analyzed. It will be noted that the importance of labor costs in total production costs increased 11 per cent.

Table 26. - Ratio of individual cost items to total production costs (excluding interest on investment), based on separate analyses of production costs of nine individual products, as reported by six mills.

	Costs before the code (first half of 1933)			Costs under the code (first half of 1934)		
	Range of ratios of each cost item to total costs, based on separate computation for each of nine products			Range of ratios of each cost item to total costs, based on separate computation for each of nine products		
	Product showing		Simple average for 9 products	Product showing		Simple average for 9 products
	Lowest	Highest		Lowest	Highest	
	In percentage					
Cost Item						
Material	17	50	27	15	35	25
Labor	17	37	26	20	35	29
Factory expense	9	50	28	6	45	24
Depreciation	1	13	4	1	9	3
General and administrative exp.	1	10	4	1	7	4
Selling expense	5	11	8	4	11	8
Processing tax	-	-	-	2	10	7

The first two columns of Table 27 show the range and the simple average of increases in the absolute amount of individual cost items from the earlier period to the later. The average increase in material costs is shown to have been 42 per cent, in labor costs to have been 53 per cent, and in all cost 41 per cent. The effect of the processing tax, of course, cannot be shown in percentage, as it rose from zero.

The three final columns of Table 27 gives the range and the simple average of the ratio to the earlier production cost totals, of the absolute amount of increase in individual cost items from the earlier period to the later. The figures in the final columns should be representative of the influence on total costs of increases which occurred in individual cost items; thus, the average mill price would have to be increased 11 per cent to cover the increased cost of materials, 14 per cent to cover increased labor costs, and 10 per cent to cover the processing tax. All of these increased costs are related partially, if not entirely, to one or another phase of the Recovery Program.

Table 27. - Measurement of maximum possible effect of the National Industrial Recovery Act on the cotton dimash industry, on the basis of production cost data submitted by complainants, covering the first six months of 1933 and of 1934

	Range of percentage increases as computed separately for each of 9 products, in the absolute amount of each cost item, from the earlier period to the later			Ratio to the earlier production cost total, of the absolute amount of increase in individual cost items from the earlier period to the later		
	Product showing: Lowest percent increase	Highest percent increase	Simple average of increases 9 products	Product showing Lowest ratio	Highest ratio	Simple average ratios f 9 product
	In percentage					
Cost Items						
Materials	0	105	42	0	32	11
Labor	34	76	53	9	20	14
Selling expense	0	79	40	1	7	3
Processing tax	x	x	x	2	18	10
Factory expense	0	35	19	0	18	4
All cost items	10	81	41	10	81	41

HANDKERCHIEFS (No. 34)

HAND-MADE AND HAND-EMBROIDERED HANDKERCHIEFS

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SURVEY OF INFORMATION

ON

HAND-MADE AND HAND-EMBROIDERED HANDKERCHIEFS

MAY, 1935

Complainants' Status under the National Industrial Recovery Act

This is a report on a complaint under Section 3(e) of the National Industrial Recovery Act with respect to imports of hand-made and hand-embroidered handkerchiefs. The complaint was filed by the Code Authority of the Needlework Industry in Puerto Rico in behalf of 25 contractors and manufacturers who claim to produce the bulk of the handkerchiefs made in Puerto Rico. The complainants have been operating under a Code of Fair Competition approved by the President on June 28, 1934.

Commodity and Tariff Status

Tariff provisions

Handkerchiefs made of cotton, linen, or any other material, which are trimmed or ornamented with lace, embroidery, applique work, etc., are dutiable under Paragraph 1529(b) of the Tariff Act of 1930 at the following rates:

Valued at not more than 70 cents per dozen, 3 cents each and 40 per cent ad valorem;

Valued at more than 70 cents per dozen, 4 cents each and 40 per cent ad valorem;

If made with hand-made or hand-rolled hems, 4 cents each plus 40 cent ad valorem.

Under the Tariff Act of 1922 ornamented handkerchiefs were dutiable under Paragraph 1430 at 90 per cent ad valorem if ornamented with lace, and 75 per cent ad valorem if ornamented with embroidery, applique, work, etc.

Plain linen handkerchiefs are dutiable under Paragraph 1016 of the Tariff Act of 1930 at 35 per cent ad valorem if they are unhemmed, and at 50 per cent ad valorem if they are hemmed or hemstitched. If the handkerchiefs are made with a hand-rolled or hand-made hem they are subject to an additional duty of 1 cent each. Under the Tariff Act of 1922 plain linen handkerchiefs were dutiable under Paragraph 1016 at 35 per cent ad valorem if unhemmed and 45 per cent ad valorem if hemmed or hemstitched.

It will be noted that identical rates are applied under Paragraph 1529(b) to handkerchiefs ornamented either with machine or hand

embroidery. However, special provision is made for hand-rolled or hand-made hems, both in Paragraph 1529(b) and in Paragraph 1016.

Analysis of ad valorem equivalents of current rates of duty

The ad valorem equivalents of the compound duties levied on ornamented handkerchiefs and on plain linen handkerchiefs made with hand-rolled or hand-made hems are shown in Table 1. Variations in these ad valorem equivalents from year to year and variations between cotton and linen are the result of changes in the unit values of the imports. The unit values of imported ornamented linen handkerchiefs rose from $0.905 per dozen in 1931 to $1.151 in 1934 and the ad valorem equivalent of the compound duties fell from 90.1 per cent in 1931 to 81.6 per cent in 1934. The higher ad valorem equivalent of the duties levied on ornamented cotton handkerchiefs is the result of the lower unit values of these handkerchiefs.

It is reasonable to assume that the bulk of the imported ornamented handkerchiefs uses embroidery and applique work rather than lace trimming. On this basis it will be observed that the compound duties applicable to ornamented handkerchiefs under the Tariff Act of 1930 represent substantial advances over the 75 per cent ad valorem rate of the Tariff Act of 1922. The current rates applicable to ornamented linen handkerchiefs represent increases over the 1922 rate ranging from 8.8 per cent in 1933 to 20.1 per cent in 1931. Current rates applicable to ornamented cotton handkerchiefs represent increases over the 1922 rate ranging from 31.9 per cent in 1931 to 50.9 per cent in 1932. Ornamented handkerchiefs must have a unit value of $1.36 a dozen before the current tariff rates will approximate an ad valorem equivalent of 75 per cent.

The ad valorem equivalents of the current rates applicable to plain linen handkerchiefs made with hand-rolled or hand-made hems exceed the 45 per cent ad valorem rate applied under the Tariff Act of 1922 by an amount ranging from 26.4 per cent in the last half of 1930 to 35.6 per cent in 1932.

Table 1

AD VALOREM EQUIVALENTS OF THE DUTY
COLLECTED ON VARIOUS TYPES OF HANDKERCHIEFS
UNDER THE TARIFF ACT OF 1930

I. Handkerchiefs Made of Vegetable Fibre Other Than Cotton, Hemmed; Embroidered Etc.

Period	Value of Imports	Amount of Duty	Ad Valorem Equivalent Per Cent
1930 (June 18 - Dec. 31)	$ 1,175,295	$1,001,848	85.2
1931	2,266,249	2,041,474	90.1
1932	1,345,604	1,192,683	88.6
1933	1,104,253	901,068	81.6

II. Cotton Handkerchiefs, Hemmed, Embroidered, Etc.

Period	Value of Imports	Amount of Duty	Ad Valorem Equivalent Per Cent
1930 (June 18 - Dec. 31)	$ 71,218	$ 71,913	101.0
1931	158,098	156,280	98.9
1932	57,787	65,431	113.2
1933	45,152	49,175	108.9

III. Handkerchiefs of Vegetable Fibre Other Than Cotton, Plain, and Made With Handmade or Hand Rolled Hem.

Period	Value of Imports	Amount of Duty	Ad Valorem Equivalent Per Cent
1930 (June 18 - Dec. 31	$ 512,585	$ 291,880	56.9
1931	642,452	373,675	58.[illegible]
1932	314,565	190,664	61.[illegible]
1933	294,786	173,671	58.9

Table 2 shows the ad valorem equivalents of the estimated amount of duty levied on imports from China of plain and embroidered linen handkerchiefs. Because the handkerchiefs imported from China have lower average unit values than the embroidered and plain linen handkerchiefs imported from European countries, the ad valorem equivalents given in Table 2 are somewhat higher than those indicated in Table 1. The inverse relationship which exists between average unit value and equivalent ad valorem rates of the current compound duties is illustrated further by the 40.5 per cent increase in the unit values of embroidered linen handkerchiefs between 1931 and 1934 and the 17.7 per cent decline in the equivalent ad valorem rates during the same period.

Table 2

ESTIMATED AMOUNT OF DUTY AND AD VALOREM EQUIVALENTS APPLICABLE TO IMPORTS FROM CHINA OF EMBROIDERED LINEN HANDKERCHIEFS. 1931 - 1934

Year	Quantity (Dozens)	Value	Value Per Dozen	Estimated Amount of Duty 1/	Ad Valorem Equivalent Per Cent
1931	1,624,240	$1,219,897	.751	1,267,594	103.9
1932	1,029,218	853,354	.829	835,366	97.9
1933	760,760	706,166	.928	647,631	91.7
1934	1,216,407	1,282,932	1.055	1,097,048	85.5

1/ Computed on the basis of 4 cents per handkerchief plus 40 per cent ad valorem.

ESTIMATED AMOUNT OF DUTY AND AD VALOREM EQUIVALENTS APPLICABLE TO IMPORTS FROM CHINA OF PLAIN LINEN HANDKERCHIEFS. 1931 - 1934

Year	Quantity (Dozens)	Value	Value Per Dozen	Estimated Amount of Duty 1/	Ad Valorem Equivalent Per Cent
1931	15,500	$ 11,191	.829	7,216	64.5
1932	35,822	22,878	.639	15,738	68.8
1933	57,369	38,311	.662	26,100	68.1
1934	82,592	71,734	.869	45,778	63.8

1/ Computed on the basis of 1 cent per handkerchief plus 50 per cent ad valorem.

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The Domestic Industry

The domestic hand-made handkerchief industry is located principally in Puerto Rico. On the mainland a fair volume of production is reported in California and Texas, and small quantities of hand-made handkerchiefs are also manufactured commercially in six additional States.

Both in Puerto Rico and on the mainland the industry relies on home workers who are paid on a piece-rate basis. The number of establishments varies from year to year, and the number of home workers is largely a matter of guesswork.

The Puerto Rican Industry

The Code Authority of the Needlework Industry in Puerto Rico reports a total of 39 contractors and manufacturers engaged in the production of handkerchiefs in Puerto Rico in 1934. Many of these operators are not engaged exclusively in the handkerchief industry, but also contract to do other types of needlework for wholesalers and manufacturers located principally in New York City. Practically none of the Puerto Rican operators is an independent manufacturer producing goods to be sold in the open market on the mainland. Operators on the Island are either the representatives of mainland manufacturing concerns or contractors who receive the fabric from the mainland manufacturer and distribute the material to various sub-agents and home workers for further processing.

The Puerto Rican industry is engaged almost entirely in hand-work so far as handkerchiefs are concerned, but the bulk of the needlework activity consists of hand rolling operations. Quite frequently a handkerchief will be embellished with machine embroidery in New Jersey and hemmed by hand in Puerto Rico. Likewise machine hemstitching may be done on the mainland and the handkerchiefs may be sent to Puerto Rico for embroidery or applique work. All available evidence indicates that a considerable proportion of Puerto Rico's handkerchief output is only partially processed on the Island.

The bulk of the Puerto Rican output is known to consist of low-prices handkerchiefs and, while there is very little competition in hand rolling operations, much of the hand embroidery is competitive with the machine embroidery of the mainland.

The 39 operators in Puerto Rico in 1934 are classified by the code authority as follows:

Large-scale operators	25
Medium-scale operators	8
Small-scale operators	6
Total	39

The accuracy or significance of this classification is open to question. The invested capital of a contractor is negligible, and comparisons on the basis of plant capacity, etc., are impossible. Twenty-five of the 39 operators are complainants, and 14 are not parties to the complaint.

The relative importance of these two groups of operators cannot be ascertained.

The principal complainants are contractors, whereas several of the non-complainants are mainland concerns which have their direct representatives in Puerto Rico. While the list of complainants is not exclusively a list of contractors, a suggestion of the basis of the complaint is found in the impression of persons returning from Puerto Rico, to the effect that a somewhat higher percentage of the total handkerchief production is now handled by direct manufacturers' representatives and the contractors feel that they are not getting their share of the business.

The number of persons employed by the handkerchief industry in Puerto Rico cannot be ascertained. As explained above, the needleworkers on the Island do not confine their activities to one type of article, but take whatever work the contractor or his sub-agent has available for distribution. The number of home workers in Puerto Rico is variously estimated from 50,000 to 100,000. The number of home workers for the entire needlework industry is unknown, so it is obvious that no estimate can be made of the number of persons engaged in hand rolling or embellishment of handkerchiefs. A system of subagents creats a situation in which individual contractors do not know how many people are working on their products.

The code sought to rectify this situation in part, but no evidence has been submitted to indicate the number of persons employed in the industry.

The mainland industry

The hand-made handkerchief industry on the mainland operates under the Code of Fair Competition for the Handkerchief Industry, approved by the President on October 9, 1933. This code permits home manufacture of "handkerchiefs made entirely by hand" and exempts such production from the minimum wage and hours of labor provisions of the code, provided that such handkerchiefs have a wholesale price of not less than $3.50 per dozen.

The mainland hand-made handkerchief industry consisted in the fall of 1934 of 24 operators, 17 of whom were located in or near the cities of Los Angeles or San Francisco. The seven remaining producers were in seven other States. The maximum number of persons employed at any time in 1934 totaled 3,873 home workers and 188 inside workers. The mainland industry is not a party to this complaint.

Domestic Production

The sales of hand-made handkerchiefs manufactured on the mainland are reported at $440,300 in 1934. (*) Aside from this estimate there is

(*) See Section 4, Introduction to Report on The Hand-made Handkerchief Industry in Continental United States, Women's Bureau, U. S. Department of Labor, January, 1935.

no available information regarding the volume of production either in terms of quantity or in terms of value for previous years. As a result, this section on domestic production will be confined to Puerto Rican production.

Official statistics

Official statistics covering shipments of handkerchiefs from Puerto Rico to the mainland are customarily taken as the measure of the volume of production in Puerto Rico. Table 3 shows these data on an annual basis for the years 1931-1934.

Table 3. - Shipments of cotton and linen handkerchiefs from Puerto Rico to continental United States, 1931-1934 1/

Year	Cotton handkerchiefs		Linen handkerchiefs	
	Quantity	Value	Quantity	Value
	Dozens		Dozens	
1931	1,298,209	$984,794	65,723	$76,726
1932	1,865,190	1,267,493	315,402	365,888
1933	1,605,119	919,589	746,587	802,924
1934	1,687,282	979,402	1,040,601	1,029,505

1/ Source: December issue of Monthly Summary of Foreign Commerce of the United States, 1931-1934.

The accuracy of these official statistics has been questioned at various times by members of the industry. One important New York concern reported an output of linen handkerchiefs in Puerto Rico in the year 1933 greater than the volume reported by the official statistics. The relatively small proportion of linen handkerchiefs reported in earlier years has been explained on the grounds that many mixed shipments were listed as being entirely of cotton. The system of reporting shipments appears to be so lax that there is no reason to believe that official statistics even indicate the trend of Puerto Rican production.

Puerto Rican production reported by mainland concerns

The general lack of adequate records on the part of the Puerto Rican contractors and the manner in which the Puerto Rican industry is integrated with the handkerchief industry of the mainland made it necessary to request information from mainland concerns which had handkerchiefs processed, in whole or in part in Puerto Rico. Sixty-five mainland concerns which were reported to be operating in Puerto Rico received questionnaires covering their handkerchief production on the Island. Because these concerns were not parties to the complaint, the questionnaires were answered on a voluntary basis, and the 29 replies which were received varied materially in the degree to which they gave the desired information.

The coverage in these 29 questionnaire returns is substantially greater than a comparison with the total number of concerns engaged in the Puerto Rican industry would indicate. The completed questionnaires constitute a good sample in the statistical sense in that firms making both high-grade and low-grade handkerchiefs are represented. Likewise, several concerns known to be among the most important operators on the Island sent in fairly detailed information.

Despite variations in wage rates over a period of years, payments by mainland concerns to the contractors represent a fairly good index of the degree of activity in the handkerchief industry in Puerto Rico. Table 4 shows this information for 22 mainland concerns by quarters for 1932, 1933, and the first nine months of 1934. It will be noted that the volume of payments was lowest in the first quarter of 1933, essentially the bank holiday period, and highest in the fourth quarter of 1933, a period in which the mainland industry was subject to a code, but no restrictions were in effect in Puerto Rico. This interpretation seems reasonable despite the fact that fourth quarter production is usually high because of seasonal factors. The greatly increased payments to the contractors continued throughout the first three quarters of 1934 and most of this period represents pre-code operation in Puerto Rico. A comparison of the trend of payments in the first nine months of 1932, 1933, and 1934 indicates an increase over the levels of 1932 of 29 per cent and 83 per cent in 1933 and 1934, respectively. On an annual basis payments in 1933 represent an increase of 55 per cent over 1932 levels, and payments in the first nine months of 1934 were in excess of 87 per cent of those reported for the previous 12-month period. All of this material would indicate something approximating a pre-code boom in Puerto Rico.

TABLE 4

ESTIMATED QUARTERLY DISTRIBUTION OF PAYMENTS BY 22 MAINLAND CONCERNS TO CONTRACTORS IN PUERTO RICO FOR WORK DONE ON HANDKERCHIEFS. 1932 - 1934

Period	Payments to Contractors 1932	1933	1934
1st Quarter	$ 168,641	$ 160,717	$ 318,774
2nd Quarter	190,390	221,509	280,483
3rd Quarter	163,589	291,630	358,332
4th Quarter	182,688	421,813	------
Total	705,308	1,095,669	957,589
	Indices of Trend. 1932 = 100		
1st Quarter	100	95.3	189.0
2nd Quarter	100	116.3	147.3
3rd Quarter	100	178.3	219.0
4th Quarter	100	230.9	
Total	100	155.3	

Trend of Payments in First 9 Months of 1932, 1933 and 1934

Period	Index. 1932 = 100
1932 (Jan. - Sept.)	100.0
1933 (Jan. - Sept.)	128.9
1934 (Jan. - Sept.)	183.2

As indicated previously the completed questionnaire returns received from the mainland concerns varied materially in the scope of the information submitted. Total handkerchief production in Puerto Rico as reported by 18 concerns is shown by quarterly periods for 1932, 1933, and the first three quarters of 1934 in Table 5. It will be noted that the rate of increase indicated in this table is somewhat slower than the rate of increase in the volume of payments to contractors, which is shown in Table 4. Total production for the first nine months of 1934 is only 71.9 per cent of reported production in the preceding 12 months, whereas a comparison on the same basis of payments to contractors indicates a ratio of 87 per cent. A comparison of the first three quarters of 1934 with the corresponding period in 1932 and 1933 indicates a substantial increase in production, but the second and third quarters of 1934 represent a decline from the preceding quarters in 1933.

TABLE 5

ESTIMATED QUARTERLY DISTRIBUTION OF TOTAL HANDKERCHIEF PRODUCTION IN PUERTO RICO FOR 18 MAINLAND CONCERNS
1932 - 1934

Period	Unit Quantity - Dozens		
	1932	1933	1934
1st Quarter	428,062	498,275	682,571
2nd Quarter	697,074	752,217	688,549
3rd Quarter	444,635	743,719	735,253
4th Quarter	517,626	933,837	
Total	2,087,397	2,928,048	2,106,373

QUARTERLY INDICES OF TREND 1932 = 100

1st Quarter	100	116.4	159.5
2nd Quarter	100	107.9	98.8
3rd Quarter	100	167.3	165.4
4th Quarter	100	180.4	
Total	100	140.3	

INDEX OF PRODUCTION IN FIRST 9 MONTHS OF 1932, 1933, AND 1934
1932 = 100

Period	Index
1932 (Jan-Sept.)	100
1933 (Jan-Sept.)	127.0
1934 (Jan-Sept.)	134.2

Although Table 5 is based on the reports of 18 concerns, several of which are known to be among the largest producers of high-grade handkerchiefs, the course of total production indicated in the table is greatly influenced by the reported production of one company, the entire production of which is known to consist of low-grade handkerchiefs selling at less than 25 cents each in retail markets. This company reported a drastic decline in production in 1934 with the result that in that year it accounted for only 18 per cent of the total output reported in Table 5, as compared with the ratios of 34.4 per cent and 31 per cent in 1932 and 1933. The course of reported production of this one company is not typical of most of the other concerns.

Table 6 shows the classification of Puerto Rican handkerchief production according to the material used. A small production of silk handkerchiefs is know to exist, but it is negligible when compared with total production. Linen and cotton are the principal materials used, and a substantial proportion of the handkerchiefs for which the material was not specified is believed to be cotton. Linen handkerchiefs represent slightly over 60 per cent of the total output reported by 21 concerns in the first nine months of 1934. A comparison of the trend of linen and cotton handkerchief production on the part of 18 concerns indicates that linen has accounted for a steadily increasing percentage of the total output.

Table 6

HANDKERCHIEF PRODUCTION IN PUERTO RICO CLASSIFIED ACCORDING TO MATERIAL USED

Material	1932 Dozens	1932 Per Cent of Total	1933 Dozens	1933 Per Cent of Total	Jan.-Sept. 1934 Dozens	Jan.-Sept. 1934 Per Cent of Total
Cotton	59,249	2.8	164,301	5.5	607,123	24.4
Linen	1,300,868	62.3	1,896,734	63.9	1,504,513	60.4
Not Specified 1/	727,280	34.9	907,647	30.6	379,235	15.2
Total	2,087,397 2/	100.0	2,968,682 3/	100.0	2,490,871 4/	100.0

1/ Production believed to consist mostly of cotton.
2/ Based on 18 questionnaire returns, 4 of which reported no production in Puerto Rico in 1932.
3/ Based on 19 questionnaire returns, all of which reported production in Puerto Rico in 1933.
4/ Represents production of 21 concerns.

TOTAL HANDKERCHIEF PRODUCTION IN PUERTO RICO OF 18 MAINLAND CONCERNS, CLASSIFIED ACCORDING TO THE MATERIAL USED 1932 - 1934 (1st. 9 MONTHS

Material	1932 Dozens	1932 Per Cent of Total	1933 Dozens	1933 Per Cent of Total	Jan.-Sept.1934 Dozens	Jan.-Sept.1934 Per Cent of Total
Cotton	59,249	2.8	140,390	4.8	289,347	13.7
Linen	1,300,868	62.3	1,880,011	64.2	1,437,791	68.3
Not Specified 1/	727,280	34.9	907,647	31.0	379,235	18.0
Total	2,087,397 2/	100.0	2,928,048	100.0	2,106,373	100.0

1/ Production believed to consist mostly of cotton

2/ Represents production of 14 concerns. Four concerns reported no production in Puerto Rico in 1932.

Table 6

TREND OF PRODUCTION OF COTTON AND LINEN HANDKERCHIEF IN PUERTO RICO. 18 MAINLAND CONCERNS. 1932 = 100

Year	Cotton 1/	Linen	Total
1932	100	100	100
1933	133.2	144.5	140.3
1934 (Jan. -Sept.)	85.0 2/	110.5 2/	100.9 2/

1/ Included production of handkerchiefs, of unspecified material which is believed to consist mostly of cotton.

2/ Index for 1934 is not adjusted, but compares production in first 9 months of 1934 with total annual production in 1932 and 1933.

Table 7 shows the quarterly distribution of linen handkerchief production in Puerto Rico as reported by 17 concerns for the period 1932, 1933, and the first three quarters of 1934. A comparison of corresponding quarters indicates a steady increase in production since 1932, although the second and third quarters of 1934 represent rather n negligible increases over the corresponding periods of 1933. A comparison on the basis of the first nine months of the year indicates an increase of 27 per cent in 1933 and 46.6 per cent in 1934 over 1932 levels. It will be noted that the reported production of linen handkerchiefs is somewhat higher relative to 1932 than the corresponding ratios covering the total handkerchief production of 18 concerns.

Table 7

ESTIMATED QUARTERLY DISTRIBUTION OF LINEN HANDKERCHIEF PRODUCTION IN PUERTO RICO FOR 17 MAINLAND CONCERNS 1932 - 1934

	Unit of Quantity - Dozens		
Period	1932	1933	1934
1st Quarter	271,009	334,740	513,503
2nd Quarter	430,758	447,136	451,279
3rd Quarter	278,993	464,538	473,009
4th Quarter	328,678	633,597	-
Total	1,309,438	1,880,011	1,437,791
INDICES OF TREND OF PRODUCTION BY QUARTERS 1932 = 100			
1st Quarter	100	123.5	189.5
2nd Quarter	100	103.8	104.7
3rd Quarter	100	166.5	169.5
4th Quarter	100	192.8	-
Total	100	143.6	

INDEX OF PRODUCTION IN FIRST 9 MONTHS OF 1932, 1933, and 1934
1932 = 100

Period	Index
1932 (Jan.-Sept.)	100
1933 (Jan.-Sept.)	127.1
1934 (Jan.-Sept.)	146.6

Embroidered handkerchief production in Puerto Rico

It is impossible to determine accurately what proportion of the total handkerchief production in Puerto Rico is embroidered. As stated before hand rolling is known to be one of the most important operations on the Island and a substantial number of plain and machine-embroidered handkerchiefs are hemmed in Puerto Rico. Since the complaint against imports of hand-made and hand-embroidered handkerchiefs did not affect the interests of the producersof the cheaper grades of handkerchiefs, it is entirely possible that the firms which gave detailed information about their Puerto Rican production consisted primarily of those concerns which had an active interest in the complaint. If this is the case, the proportion of embroidered handkerchiefs shown in the questionnaire returns is bound to be somewhat higher than a more comprehensive survey would indicate.

On the basis of the production data submitted by 21 mainland concerns, 63.7 per cent of the Puerto Rican handkerchief production was ornamented with embroidery, applique work, etc., in the first nine months of 1934. This is the broadest coverage of the Puerto Rican industry that it is possible to develop from the questionnaire returns.

Of the 21 companies reporting production for 1934, two reported no production of embroidered handkerchiefs, and numberous others reported the production of varying quantities of plain linen and cotton handkerchiefs. One concern reported its production of embroidered handkerchiefs, but failed to give a breakdown according to retain price brackets.

Table 8 shows the distribution of the reported embroidered handkerchief production (cotton and linen) according to retail price classes for 1932, 1933, and the first nine months of 1934. In the latter period, 18 concerns reported that 74.2 per cent of their embroidered handkerchief production consisted of low-grade handkerchiefs priced to sell in retail markets at less than 25 cents each. In the main, these handkerchiefs are sold in competition with the machine-embroidered products of the mainland. Handkerchiefs selling at 25 cents or more, retail, accounted for 25.8 per cent of total embroidered handkerchief production, and most of these were concentrated in the lower price brackets.

If 63.7 per cent of the total production reported in the first nine months of 1934 consisted of embroidered handkerchiefs, and if 25.8 per cent of these handkerchiefs may be regarded as a high-grade product designed to sell at 25 cents or more in retail markets, it is evident that the ratio of high-grade handkerchiefs to total Puerto Rican production is 16.4 per cent. It should be emphasized that this represents a high estimate and that a more complete survey would probably indicate a lower ratio.

Table 8

DISTRIBUTION OF TOTAL REPORTED PUERTO RICAN PRODUCTION OF EMBROIDERED HANDKERCHIEFS ACCORDING TO RETAIL PRICE CLASSES

Retail Price Classes	1931 1/	1932 2/	1933 3/	Jan.-Sept. 4/ 1934
	Dozens	Dozens	Dozens	Dozens
Under 25¢	970,506	1,055,132	1,658,067	1,165,769
25¢, 3 for $1.00, 35¢	99,988	286,358	396,106	354,830
50¢ and up	19,481	16,474	51,710	50,089
Total	1,089,975	1,357,964	2,105,883	1,570,688
	PERCENTAGE DISTRIBUTION			
Under 25¢	89.0	77.7	78.7	74.2
25¢, 3 for $1.00, 35¢	9.2	21.1	18.8	22.6
50¢ and up	1.8	1.2	2.5	3.2
Total	100.0	100.0	100.0	100.0

1/ Based on 10 questionnaire returns giving production of embroidered handkerchiefs 1931-1934, however 6 concerns indicate no production in 1931

2/ Based on 13 questionnaire returns. Five concerns indicated no production in 1932.

3/ Based on 15 questionnaire returns. Three concerns indicated no production in 1933.

4/ Based on 18 questionnaire returns, all of which reported production for the first 9 months of 1934.

In order to establish the trend of production in the various classes of embroidered handkerchiefs, it has been necessary to select such questionnaire returns as give the breakdown according to retain price classes for a period of several years. Table 9 shows such a distribution for 13 concerns for the period 1932 - September, 1934, and for 15 concerns in the period 1933 - September, 1934.

There is no question as to the adequacy of the sample of 13 concerns. Of the reported embroidered handkerchief production in the first nine months of 1934, 13 concerns accounted for 81 per cent of the total. For these concerns, it will be noted that the percentage of high-grade handkerchiefs, i.e., handkerchiefs valued at 25 cents or more in retail markets, stood at 22.3 per cent in 1932, 20 per cent in 1933, and 25.9 per cent in 1934. With the addition of two more concerns which reported the retail price breakdown for their embroidered handkerchief production in 1933 and 1934, these percentages were increased to 21.3 per cent for 1933 and 27.8 per cent for 1934.

Table 9

DISTRIBUTION OF EMBROIDERED HANDKERCHIEF PRODUCTION IN PUERTO RICO ACCORDING TO RETAIL PRICE CLASSES FOR 13 REPORTING CONCERNS 1932 - 1934

Retail Price Classes	1932 Dozens	1933 Dozens	Jan.-Sept. 1934 Dozens
Under 25¢	1,055,132	1,631,322	953,971
25¢, 3 for $1.00, 35¢	286,358	369,677	298,233
50¢ and up	16,474	37,282	35,302
Total	1,357,964	2,038,281	1,287,506
Under 25¢	77.7	80.0	74.1
25¢, 3 for $1.00,35¢	21.1	18.2	23.2
50¢ and up	1.2	1.8	2.7
Total	100.0	100.0	100.0

DISTRIBUTION OF EMBROIDERED HANDKERCHIEF PRODUCTION IN PUERTO RICO ACCORDING TO RETAIL PRICE CLASSES FOR 15 REPORTING CONCERNS 1933 and JAN.- SEPT. 1934

Retail Price Classes	1933 Dozens	Jan. -Sept. 1934 Dozens
Under 25¢	1,658,067	981,684
25¢, 3 for $1.00, 35¢	396,106	329,323
50¢ and up	51,710	48,342
Total	2,105,883	1,359,349

(Continued on following page)

Table 9

(Cont'd)

PERCENTAGE DISTRIBUTION

Retail Price Classes	1933	Jan.- Sept. 1934
Under 25¢	78.7	72.2
25¢, 3 for $1.00, 35¢	18.8	24.2
50¢ and up	2.5	3.6
Total	100.0	100.0

Table 10 compares the indices of trend of embroidered handkerchief production in various retail price classes, as indicated in 13 questionnaire returns giving a continuous series since 1932 and in 15 questionnaire returns giving data for 1933 and the first nine months of 1934. No attempt has been made to adjust the index for the nine months' period in 1934 because there is no satisfactory basis on which to construct an index of seasonal variation. It will be noted that the production of low-priced handkerchiefs in the first nine months of 1934 is materially under 1932 levels whereas the production of high-grade handkerchiefs has shwon a very satisfactory increase over 1932 levels amounting to approximately 4 per cent in the case of medium-priced handkerchiefs and 114 per cent in the case of handkerchiefs priced at 50 cents or more in retail markets. According to the information submitted by the mainland concerns the lag, if any, in the Puerto Rican production of embroidered handkerchiefs in 1934, took place in the low-priced product which is competitive with the machine-embroidered product of the mainland.

Table 10

COMPARISON OF INDICES OF PRODUCTION OF EMBROIDERED HANDKERCHIEFS IN VARIOUS RETAIL PRICE CLASSES
1933 - 100

	13 Concerns				15 Concerns			
Year	Under 25¢	25¢ 3 for $1.00 35¢	50¢ and up	Total	Under 25¢	25¢ 3 for $1.00 35¢	50¢ and up	Total
1932	64.7	77.5	44.2	66.6	-	-	-	-
1933	100	100	100	100	100	100	100	100
1934 (9 months not adjusted	58.5	80.7	94.7	63.2	59.2	83.1	93.5	64.6

Table 11

ESTIMATED 1/ PUERTO RICAN PRODUCTION OF EMBROIDERED HANDKERCHIEFS PRICED AT 25 CENTS OR MORE RETAIL
18 CONCERNS, 1931 - 1934

Year	Production 1/ Dozens	Index 1931=100	Index 1933=100
1931	462,844	100	93.6
1932	367,774	79.5	74.4
1933	494,288	106.8	81.9
9 month			

1/ The basis of the estimate is the index of production of embroidered handkerchiefs priced to sell at retail at 25 cents or higher, as indicated in the reports of 13 concerns. Total embroidered handkerchief production priced at 25 cents or more for 18 concerns was 404,919 dozen in the period January-September, 1934. This figure has been adjusted to show estimated production since 1931.

Table 11, which immediately precedes this section, represents an effort to construct the probably production for 18 concerns of highgrade embroidered handkerchiefs, i.e., those priced at 25 cents or more in retail markets, since 1931. The basis of this estimate is the experience of 13 representative concerns and the adjustment for 1931 has been made on the basis of the questionnaire returns which gave 1931 data. While this estimate is highly tentative, it represents the nearest approach possible, on the basis of the data

submitted, to a statement of the volume and trend of high-grade handkerchief production in Puerto Rico. It should be noted that no attempt has been made to adjust the indices of production as as to make the nine months' data submitted for 1934 strictly comparable with previous years. However, the evidence indicates that production of embroidered handkerchiefs priced at 25 cents or more, retail, has increased steadily from 1932 until the end of the third quarter of 1934.

Production data submitted by Puerto Rican contractors

Of the 25 complainants, 10 submitted production data by quarters covering the period 1932 - September, 1934. These contractors were unable to classify their production either with reference to the material used or the retail price classes into which their production would fall. The available data are shwon in Table 12. It will be noted that peak production is reported in the fourth quarter of 1933 and that the low point of operations appears to be the first quarter of 1932, although reported production for the third quarter of 1934 is almost on a parity with the 1932 low. This presumably would indicate the dampening influence of the code which became effective July 19, 1934. A comparison of these data with corresponding material submitted by the mainland concerns, shown in Table 5, indicates a measure of similarity in the reported trend of production in 1932 and 1933, but the Puerto Rican contractors report a drastic decline in 1934 which is not substantiated by the reports submitted by the mainland concerns.

Table 12

TOTAL HANDKERCHIEF PRODUCTION OF 10 PUERTO RICAN CONTRACTORS BY QUARTERS 1932 - 1934 1/

Year	1st Quarter Dozens	2nd Quarter Dozens	3rd Quarter Dozens	4th Quarter Dozens	Total Dozens
1932	364,666	439,085	386,847	514,778	1,705,376
1933	390,852	530,641	622,672	936,633	2,470,798
1934	381,353	541,620	365,447	-	1,288,420
			Indices of Trend, 1932=100		
1932	100	100	100	100	100
1933	104.4	120.9	161.	182.	144.9
1934	104.6	123.4	94.5	-	-

1/ Production data for last quarter 1934, not available.

INDEX OF PRODUCTION IN FIRST 9 MONTHS of 1932, 1933, and 1934. 1932=100

Period	Production (Dozen)	Index
Jan.-Sept. 1932	1,190,598	100
" " 1933	1,534,165	128.9
" " 1934	1,288,420	108.2

Table 13 shows the production of five Puerto Rican contractors from 1931 through the first three quarters of 1934. In 1931 and 1932 the course of production remained practically unchanged, at least on an annual basis. In 1934, these contractors reported a 50 per cent increase in production, and in the first nine months of 1934, a volume of production equal to approximately 85 per cent of the toal production in 1931 and 1932. Relative to the year 1933, production in the first nine months of 1934 amounted to 56.9 per cent of the total - a slightly better showing than that indicated in Table 12.

A comparison of reported production with the trend of shipment as reported officials statistics indicates wide differences. Furthermore, it should be noted that the reported production of ten contractors exceeds the official statistics in point of quantity in 1932 and 1933.

Table 13
HANDKERCHIEF PRODUCTION IN PUERTO RICO
REPORTED BY FIVE CONTRACTORS. 1931-1933,
AND THE FIRST 9 MONTHS OF 1934

Year	Production (Dozens)	Index of Production 1932=100
1931	1,029,433	100.83
1932	1,029,113	100
1933	1,549,983	150.61
1934 (9 months)	881,687	85.67

TOTAL HANDKERCHIEF SHIPMENTS FROM PUERTO RICO
AS REPORTED IN OFFICIAL STATISTICS. 1931-1933
AND THE FIRST 9 MONTHS OF 1934

Year	Shipments	Index of Shipments
1931	1,363,932	62.6
1932	2,180,592	100.0
1933	2,351,706	107.8
1934 (9 months)	2,130,140	97.7

1/ Based on 9 months data and not adjusted.

Imports of linen handkerchiefs ornamented with embroidery, etc.

Table 14 shows imports for consumption of ornamented linen handkerchiefs over the ten-year period 1925-1934. Prior to 1930 the United Kingdom was the chief source of supply, and the country of secondary importance was Switzerland. Since 1930 China has been the principal supplier of imported ornamented linen handkerchiefs. The growth of the imports from China is well illustrated by the ratio of imports from China to total imports. In 1925 this ratio stood at 2.03 per cent; in 1929, at 17.42 per cent; in 1931, at 64.87 per cent; and in 1934, at 88.72 per cent.

Both total imports and imports from China reached a peak in 1931. Imports from countries other than China reached a peak in 1929. Relative to 1929, the index of total imports in 1934 stood at 82.10, the index of imports from China stood at 418.14, and the index of imports from other countries, 11.21. The low point in the importation of embroidered linen handkerchiefs, subsequent to the peak year of 1931, was reached in 1933. Imports from China registered a decline of 53.2 per cent, largely as a result of a style change which created a demand for larger-sized women's handkerchiefs. The time required to place orders in Chinaand receive the finished product for distribution to domestic retail outlets is variously estimated from 6 to 10 months. As a result the importers of Chinese handkerchiefs found themselves stocked with poorly styled products and were unable to place additional orders in China for quick delivery.

The unit value of the imports from China have always been materially below the unit value of imports from European countries. In 1931 the average value of the embroidered linen handkerchiefs imported from China was 36.8 per cent below the value of the imports from other countries. In 1932 this difference amounted to 29.3 per cent; in 1933 41.9 per cent and in 1934, 44.6 per cent. Despite this increasing price disparity, the average value of the handkerchiefs imported from China rose from $0.751 per dozen in 1931 to $1.0555 per dozen in 1934, an increase of 40.5 per cent. During the same period the average unit value of the embroidered linen handkerchiefs imported from European countries rose from $1.189 to $1.906 per dozen, an increase of 62.4 per cent.

Table 15 shows imports for consumption of ornamented linen handkerchiefs, total and from China, by quarters, 1931-1934. It will be noted that the imports follow a well defined seasonal pattern in which imports are uniformly heaviest in the last half of the year. In every year the fourth quarter represents the peak of importation and is followed in importance by the third quarter. This is due to the increased sales of high-grade handkerchiefs during the Christmas holiday period.

In connection with this seasonal variation is the volume of

Table 14

IMPORTS FOR CONSUMPTION OF LINEN HANDKERCHIEFS ORNAMENTED WITH EMBROIDERY ETC. 1925 - 1934

Year	Quantity Total Imports Dozens	Quantity Imports From China Dozens	Quantity Imports All Other Countries Dozens	Index - Quantity - 1929 = 100			Ratio of Imports From China to Total Imports Per Cent
				Total Imports	Imports From China	All Other Countries	
1925	1,023,030	20,795	1,002,235	61.26	7.15	72.67	2.03
1926	1,046,180	21,427	1,024,753	62.64	7.37	74.3	2.05
1927	1,299,186	34,550	1,264,636	77.79	11.88	91.7	2.66
1928	1,400,622	113,289	1,287,333	83.87	38.94	93.34	8.09
1929	1,670,042	290,910	1,379,132	100.0	100.0	100.0	17.42
1930	1,894,754	1,115,057	779,697	113.46	383.30	56.54	58.85
1931	2,503,940	1,624,240	879,700	149.93	558.33	63.79	64.87
1932	1,448,692	1,029,218	419,474	86.75	353.79	30.42	71.04
1933	1,010,194	760,760	249,434	60.49	261.51	18.09	75.31
1934	1,371,058	1,216,407	154,651	82.10	418.14	11.21	88.72

	Value	Value	Value	Unit Values (per dozen)		
1925	$1,642,226	$ 24,002	$1,618,224	$1.605	$1.154	1.615
1926	1,679,270	22,866	1,656,404	1.605	1.067	1.616
1927	1,948,528	38,936	1,909,592	1.500	1.127	1.51
1928	1,972,774	95,059	1,877,715	1.408	.839	1.459
1929	2,187,431	269,748	1,917,683	1.310	.927	1.39
1930	1,933,262	826,164	1,107,098	1.02	.741	1.42
1931	2,266,249	1,219,897	1,046,352	.905	.751	1.189
1932	1,345,604	853,354	492,250	.929	.829	1.173
1933	1,104,253	706,166	398,087	1.093	.928	1.596
1934	1,577,766	1,282,932	294,834	1.151	1.055	1.906

imports, it should be noted that the highest unit value for Chinese handkerchiefs were registered in the fourth quarter of each year with the exception of 1932.

Table 15

IMPORTS FOR CONSUMPTION OF LINEN HANDKERCHIEFS, ORNAMENTED WITH EMBROIDERY, ETC., BY QUARTERS 1931 - 1934

Period	Total Imports	Imports From China	Ratio of Imports From China to Total Imports	Value per Dozen	
				Total Imports	Imports From China
	Dozens	Dozens	Per cent		
1931					
1st Quarter	359,365	257,250	71.58	$0.954	$0.737
2nd Quarter	385,811	265,969	68.94	.808	.674
3rd Quarter	739,104	430,887	58.30	.895	.739
4th Quarter	1,019,660	670,134	65.72	.932	.795
Total	2,503,940	1,624,240	64.87	.905	.751
1932					
1st Quarter	289,397	233,732	80.76	.872	.800
2nd Quarter	185,032	114,022	61,62	.949	.885
3rd Quarter	374,135	244,079	65.24	.928	.838
4th Quarter	600,128	437,385	72.88	.950	.825
Total	1,448,692	1,029,218	71.04	.929	.829
1933					
1st Quarter	127,305	85,261	66.81	1.088	.824
2nd Quarter	114,821	84,239	73.36	1.161	.762
3rd Quarter	347,557	267,665	77.01	.953	.921
4th Quarter	420,211	323,595	77.00	.803	1.005
Total	1,010,194	760,760	75.31	1.093	.928
1934					
1st Quarter	200,364	172,937	86.31	1.153	1.093
2nd Quarter	131,209	110,736	84.40	1.145	1.021
3rd Quarter	439,831	385,112	87.56	1.111	1.006
4th Quarter	599,654	547,622	91.32	1.180	1.084
Total	1,371.058	1,216,407	88.72	1.151	1.055

Imports of embroidered cotton handkerchiefs

Table 16 shows the annual imports for consumption of cotton handkerchiefs ornamented with embroidery, etc., for the period 1931-1934. The bulk of these handkerchiefs are machine-embroidered and Switzerland is the chief source of supply. However, there is a small importation of hand-embroidered cotton handkerchiefs from China which amounted in 1933 to 1,404 dozen, and in 1934 to 1,052 dozen.

At one time imports of cotton handkerchiefs ornamented with embroidery, etc., constituted a substantial proportion of the total imports of ornamented handkerchiefs, but in recent years this trade has declined to negligible proportions. It will be noted that total imports for 1934 amounted to only 5.4 per cent of the value of imports in 1931.

Table 16. - Imports for consumption of cotton handkerchiefs ornamented with embroidery, etc., 1931-1934

Year	Quantity	Value	Value per dozen	Index of quantity 1931 = 100
	Dozens			
1931	240,759	$158,098	$0.657	100.0
1932	113,544	57,787	.509	47.2
1933	82,403	45,152	.548	34.2
1934	13,047	10,478	.803	5.4

Imports of plain linen handkerchiefs

Table 17 shows the imports for consumption by quarters for the period 1931-1934, of plain linen handkerchiefs which are hemmed or hemstitched. The bulk of these handkerchiefs is from the United Kingdom. The imports from China which represented less than 1 per cent of the total imports in 1931, represented 29 per cent of the total in the fourth quarter of 1934, and 19.4 per cent of the total for the year 1934. Imports from European countries declined in 1934 to less than 20 per cent of the 1931 level of imports, whereas imports from China increased 511.8 per cent during the same period.

The exact character of the total imports of plain linen handkerchiefs is not known. A substantial proportion consists of men's handkerchiefs, and many of the imports are block printed by hand. So far as imports from the United Kingdom are concerned, they may be machine-made, hand-made, or a combination of hand and machine processes.

Table 17

IMPORTS FOR CONSUMPTION OF PLAIN LINEN HANDKERCHIEFS

Year	Quantity Total Imports Dozens	Quantity Imports From China Dozens	Quantity Imports From All Other Countries Dozens	Ratio Imports From China to Total Imports	Value Total Imports	Value Imports From China	Value Imports From All Other Countries
1931							
1st Quarter	333,991	3,140	330,851	.94	$324,080	$2,773	$321,307
2nd Quarter	370,214	3,144	367,070	.85	329,978	2,894	327,084
3rd Quarter	511,784	3,551	508,233	.694	484,150	2,663	481,487
4th Quarter	514,036	3,665	510,371	.713	393,398	2,861	390,537
Total	1,730,025	13,500	1,716,525	.78	1,531,606	11,191	1,520,415
1932							
1st Quarter	317,611	1,896	315,715	.60	208,665	1,206	207,459
2nd Quarter	209,919	4,509	205,410	2.15	149,823	2,839	146,984
3rd Quarter	263,275	15,735	247,540	5.98	194,773	9,020	185,753
4th Quarter	351,222	13,682	337,540	3.90	255,908	9,813	246,095
Total	1,142,027	35,822	1,106,205	3.14	809,169	22,878	786,291
1933							
1st Quarter	253,551	7,230	246,321	2.85	165,417	3,747	161,670
2nd Quarter	150,282	11,135	139,147	7.41	111,573	7,025	104,548
3rd Quarter	246,529	21,483	225,046	8.71	240,986	14,617	226,369
4th Quarter	179,888	18,021	161,867	10.02	197,665	12,922	184,743
Total	830,250	57,869	772,381	6.97	715,641	38,311	677,330
1934							
1st Quarter	107,850	13,783	94,067	12.78	103,769	10,910	92,859
2nd Quarter	76,436	10,019	66,417	13.11	77,252	9,140	68,112
3rd Quarter	115,778	22,467	93,311	19.41	131,765	20,647	111,118
4th Quarter	124,868	36,323	88,545	29.09	139,763	31,037	108,726
Total	424,932	82,592	342,340	19.44	452,549	71,734	380,815

INDICES OF TREND AND UNIT VALUES OF IMPORTS

Year	Indices of Trend in The Quantity of Imports 1931 = 100			Unit Values per Dozen		
	Total Imports	Imports From China	Imports From All Other Countries	Total Imports	Imports From China	Imports From All Other Countries
1931	100	100	100	$.885	$829	$.886
1932	66	265.4	64.4	.709	.639	.711
1933	48	428.7	45.0	.862	.662	.877
1934	24.6	611.8	19.9	1.065	.869	1.112

Competitive character of plain linen handkerchiefs imported from China

For the purposes of this complaint, special interest attaches to the imports from China of plain linen handkerchiefs. It is believed that the bulk of these imports consist of women's handkerchiefs ornamented with a shadow hem or an Armenian edge. Since the centers are plain these handkerchiefs have been held dutiable under Paragraph 1016 of the Tariff Act of 1930, 1/ but the ornamentation is such as to make them competitive in retail markets with embroidered handkerchiefs.

Trend of imports from China of all linen handkerchiefs

Table 18 shows a comparison of the total imports from China of plain and embroidered linen handkerchiefs, by quarters, for the period of 1931-1934. It will be observed that the low point in imports was reached in the first quarter of 1933 and that the peak quarter of 1933 and the peak period of imports occurred in the fourth quarter of 1931. On on annual basis imports in 1934 amounted to 79.3 per cent of the 1931 volume, but a comparison of imports during the last six months of these years shows a ratio of 89.5 per cent in 1934.

Table 18

COMPARISON OF IMPORTS FOR CONSUMPTION FROM CHINA OF LINEN HANDKERCHIEFS, PLAIN AND EMBROIDERED, BY CORRESPONDING QUARTERS 1931-1934

Year	1st Quarter Dozens	2nd Quarter Dozens	3rd Quarter Dozens	4th Quarter Dozens	Total Dozens
1931	260,390	269,113	434,438	673,799	1,637,740
1932	235,628	118,531	259,814	451,067	1,065,040
1933	92,491	95,374	289,148	341,616	818,629
1934	186,720	120,755	407,579	583,945	1,298,999
		INDICES OF TREND 1931 = 100			
1931	100	100	100	100	100
1932	90.5	44.0	59.8	66.9	65.0
1933	35.5	35.4	66.6	50.7	50.0
1934	71.7	44.9	93.8	86.7	79.3

1/ See decision of the customs court in T.D.46477 and by the U.S. Court of Customs and Patent Appeals in T.D.47067.

Retail price classes at which handkerchiefs imported from China are sold

In order to establish the character of the competition between the Puerto Rican handkerchief industry and the imports from China it was necessary to request the importers of Chinese handkerchiefs to designate the retail price classes at which these handkerchiefs were sold. The importer sells the handkerchiefs to retail outlets and is in a position to know the retail price because of the relatively fixed price relationships which prevail in the handkerchief industry. For example, handkerchiefs selling at 25 cents each in retail markets have a wholesale value of $1.75 to $2 per dozen; handkerchiefs having a retail value of 50 cents each have a wholesale value of $3.65 to $4.25 per dozen. In periods of declining prices, competition takes the form of supplying a better fabric or putting more work on handkerchiefs in the lower price brackets.

Table 19 shows the distribution according to retail price classes of embroidered linen handkerchiefs imported from China. It will be noted that the percentage retailed at less than 25 cents is negligible, except in 1933, a year in which the importers had considerable quantities of poorly styled products. In this year only 4.8 per cent of the total was sold at less than 25 cents. The bulk of the handkerchiefs imported from China retail at 25 cents, 3 for $1, and 35 cents; however the percentage selling at 25 cents has declined since 1931 whereas the percentage selling for 3 for $1 and 35 cents has increased since 1931. Likewise, there has been a great increase in the 50-cent and 75-cent classes.

The fact that handkerchief sales for the first nine months of 1934 indicate an increased percentage in the 25-cent and 3-for-$1 price brackets is not conclusive evidence of a reversal of the trend toward higher prices for the handkerchiefs imported from China. The fourth quarter is the best period for sales of high-priced handkerchiefs and complete data for the year 1934 would probably result in a different percentage distribution from that reported in Table 19. This is a matter of importance because the complainants allege that Chinese handkerchiefs were not sold at 25 cents in retail markets until recently, whereas the data submitted by the importers would indicate that 63 per cent of their sales was in the 25-cent bracket and 78 per cent was below the 50-cent level in 1931.

Table 19

DISTRIBUTION OF IMPORTS FROM CHINA OF EMBROIDERED LINEN HANDKERCHIEFS ACCORDING TO RETAIL PRICE CLASSES

Price Classes	1931 Per Cent	1932 Per Cent	1933 Per Cent	1934 Per Cent 1st 9 months
5¢, 10¢	0	0	0	0
12½¢, 15¢, 3 for 50¢	.7	1.8	4.8	.4
25¢	63.3	41.8	29.5	36.6
3 for $1.00, 35¢	14.3	23.4	23.6	26.0
50¢	17.4	24.3	32.2	28.0
75¢ and up	4.3	8.7	9.9	9.0
Total	100.0	100.0	100.0	100.0

DISTRIBUTION OF IMPORTS FROM CHINA OF EMBROIDERED LINEN HANDKERCHIEFS ACCORDING TO BROADER RETAIL PRICE CLASSES

Price Classes	1931 Per Cent	1932 Per Cent	1933 Per Cent	1934 Per Cent 1st 9 months
Under 25¢	.7	1.8	4.8	.4
25¢, 3 for $1.00, 35¢	77.6	65.2	53.1	62.6
50¢ and up	21.7	33.0	42.1	37.0
Total	100.0	100.0	100.0	100.0

			(9 Months)1/
Unit values of embroidered linen handkerchiefs imported from China	$.751 per dz.	$.829 per dz.	$9.28 per dz.
U. S. Customs Statistics			$1.031 per dz.

1/ The unit value of imports for the 4th quarter of 1934 is $1.084 so the percentage distribution according to retail price classes for 1934 would be altered on an annual basis. Sales of high priced handkerchiefs are heavy during the Christmas Holidays.

Table 20 shows the coverage represented by the importers' questionnaire returns. Not all importers are represented, but the replies are known to be from representative concerns and the ratio of reported imports to total imports is over 53 per cent for 1931, a year for which the number of companies reporting was only 13. In later years the coverage is more adequate in all years it is sufficient to constitute a good sample.

Table 20

COVERAGE REPRESENTED BY IMPORTERS' QUESTIONNAIRE RETURNS

Year	Number of Concerns Reporting	Ratio of Reported Imports to Imports for Consumption from China of Embroidered Linen Handkerchiefs
		Per Cent
1931	13	53.8
1932	16	86.4
1933	16	78.4
1934	18	94.2 1/
1st 9 months		

1/ Several replies covered handkerchiefs in bonded warehouses and in transit from China. This factor accounts for the high ratio of reported imports to total imports for consumption for the first 9 months of 1934.

Ratio of Imports to Domestic Production

For purposes of constructing a ratio of imports to domestic production of hand-made and hand-embroidered handkerchiefs, it has been necessary to segregate certain portions of the imports and of the reported domestic production.

Imports which may be deemed competitive with the domestic production are imports of linen handkerchiefs from China, although, as indicated in a previous section, the handkerchiefs imported from China are materially higher-priced in retail markets than the better grades of the Puerto Rican output. Imports of plain linen handkerchiefs from European countries have declined drastically in volume since 1931 and are of a type which offers relatively little competition to Puerto Rico, but the plain linen handkerchiefs imported from China have elaborate hems which makes them competitive with a portion of the ornamented handkerchiefs produced in Puerto Rico.

Embroidered linen handkerchiefs from European countries have materially higher unit values than those imported from China, and the price spread has been increasing in the past few years. For this reason, it would appear that Puerto Rico encounters very little competition from European countries since the price and quality of the imports are so much higher than the price and quality of the domestic product.

The same problem of comparability arises in a comparison of the domestic output and the imports from China, but a refined analysis is not possible on the basis of the information submitted in connection with this complaint.

Table 21 gives the ratio of imports of linen handkerchiefs, plain and embroidered, to the estimated Puerto Rican production of competitive items as reported by 18 mainland concerns. To be classed as competitive, Puerto Rican handkerchiefs must be priced at 25 cents or more in retail markets. It will be noted that the ratio of imports to domestic production stood at 353.8 per cent in 1931 and 289.6 per cent in 1932. In 1933 it fell to 165.6 per cent and in the first nine months of 1934 rose slightly to 170.6 per cent.

If the comparison is made on the basis of an index of trend using 1931 as 100, a comparison of the first nine months of 1934 with the full year in 1931 shows the index of Puerto Rican production to be 87.5 and the index of imports to be 48.7. If it is assumed that the post-code decline in Puerto Rico - a decline which followed a pre-code boom - means that the production reported for the first nine months of 1934 is in effect the production for the entire year, and if we are to add the fourth quarter imports from China, the indices for 1934 will stand at 87.5 for Puerto Rican production and 79.3 for the imports from China.

Despite the highly tentative character of the estimated Puerto Rican production, it is clear that the indices of trend and ratios of

imports to domestic production presented in Table 21 overstate the competition between the Puerto Rican output and the imports from China. If an adjustment is made on the basis of the comparability of the imports and the Puerto Rican output, and if an allowance is made for the declining proportion of the imports from China which sell in the 25-cent price bracket, the ratio of imports to domestic production would be somewhat lower.

Effect of Fluctuations in Foreign Exchange Rates

In order to appraise the effect of fluctuations in foreign exchange rates on the importation of linen handkerchiefs from China, it is necessary to have a slight knowledge of the organization of the Chinese industry. The linen is shipped from Belfast and stored in Chinese ports, particularly Shanghai. When orders for handkerchiefs are placed by American importers, the linen is withdrawn from storage and turned over to Chinese contractors who are responsible for the needlework. Obviously the linen is paid for in Pounds Sterling and labor is compensated in one of the several Chinese currencies. Transportation costs are presumably paid either in sterling or in dollar exchange.

The proportion of the total cost of the handkerchiefs which is represented by raw material cost, transportation, labor, etc., is not known, but from data submitted in connection with this complaint regarding domestic costs in Puerto Rico, it would appear that linen was the principal cost item in the manufacture of handkerchiefs in China.

Table 22 shows the dollar rates of exchange for the English pound and the yuan dollar since 1929. It will be noted that the trend of imports has not been effected materially by the fluctuations in foreign exchange. The year 1931 was the peak year in the importation of linen handkerchiefs from China and any linen entering into these handkerchiefs was bought prior to England's departure from the gold standard. The year 1932 saw materially lower levels of exchange rates, both for sterling and the yuan dollar, but this did not result in increased imports. Furthermore, exchange rates continued to be relatively low in the first part of 1933, when the orders must be placed in China if the handkerchiefs are to be available for the fall trade in the United States, but handkerchief imports from China were at a low level in that year because of a style change. Subsequently, as a result of our own devaluation and our silver policy, exchange rates for sterling and the yuan dollar rose appreciably, but 1934, especially in the last half of the year, saw a marked increase in the imports of linen handkerchiefs from China.

The increasing unit values of the handkerchiefs from China are influenced in all probability by the increasing exchange rates, especially the more recent increases in the value of the yuan dollar, but there is no evidence to indicate that fluctuations in foreign exchange rates have been an important influence on the trend of handkerchief imports from China.

Table 21

COMPARISON OF TOTAL IMPORTS FOR CONSUMPTION FROM CHINA OF LINEN HANDKERCHIEFS, PLAIN AND EMBROIDERED, WITH ESTIMATED PUERTO RICAN PRODUCTION OF COMPETITIVE ITEMS. 1/
18 CONCERNS 1931 - 1934

Year	Estimated Puerto Rican Production	Imports	Ratio of Imports to Puerto Rican Production
	Dozens	Dozens	Per Cent
1931	462,844	1,637,740	353.8
1932	367,774	1,065,040	289.6
1933	494,288	818,629	165.6
1934 (9 months)	404,919	715,054	176.6

INDICES OF TREND 1931 = 100

1931	100	100
1932	79.5	65
1933	106.8	50
1934 (9 months)	87.5	43.7

1/ Embroidered handkerchiefs selling in retail markets at 25 cents each or higher are deemed competitive with imports from China.

Table 22

Relative changes in the dollar exchange rate of the English pound and the yuan dollar

Period	English value of -		Index of exchange value of -	
	English pound	Yuan dollar	English pound	Yuan dollar
	Cents		1930=100	
1929	485.69	41.90	99.9	140.0
1930	486.21	29.92	100.0	100.0
1931	453.50	22.44	93.3	75.0
1932	350.61	21.74	72.1	72.7
1933				
Jan. - Mar.	340.54	20.21	70.0	67.5
Apr. - June	388.24	24.28	79.9	81.1
July - Sept.	460.58	29.01	94.7	97.0
Oct. - Dec.	497.80	32.07	102.4	107.2
1934				
Jan. - Mar.	505.86	34.31	104.0	114.7
Apr. - June	510.27	33.22	104.9	111.0
July - Sept.	503.32	34.78	103.5	116.2
Oct. - Dec.	495.85	34.07	102.0	113.9
1935				
Jan. - Mar.	484.74	36.61	99.7	122.4
April- May	486.23	39.94	100.0	133.5

Competitive Factors

Puerto Rico possesses an advantage over China in the manufacture of handkerchiefs as a result of proximity to continental United States. This becomes highly important in producing highly styled and novelty items.

The average elapsed time between the date of cloth shipments from New York and the receipt of handkerchiefs from the Puerto Rican contractors appears to be from four to six weeks for hand rolling and from eight to twelve weeks for embroidery work. The time involved depends in part on the degree of ornamentation, but in part on the collection mechanism maintained by the contractor. When work is distributed through a series of sub-agents throughout the hinterland, there is considerable delay in returning the finished product to New York. However, even at its slowest, the Puerto Rican deliveries are made with great speed as compared with the six to ten-month period required to receive handkerchiefs ordered in China. This lengthy period obviously effects the rate of capital turnover and raises capital costs to the importer from China.

So far as skill in needlework is concerned, the available Chinese workers are undoubtedly superior to the Puerto Ricans.

APPENDIX

QUARTERLY PAYROLL DATA REPORTED BY 10 PUERTO RICAN CONTRACTORS ENGAGED IN HANDKERCHIEF PRODUCTION 1932-1934

A.- HOME WORKERS PAYROLL

Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
1932	$104,675	$136,836	$102,760	$144,756	$488,447
1933	117,571	149,911	170,188	75,360	713,030
1934	125,099	149,145	109,079	1/	383,333

Indices of trend - 1932 =100

1932	100	100	100	100	100
1933	112.3	110	165.6	190.3	146
1934	119.5	109.5	106.1	-	-

1/ Payroll for 4th Quarter 1934, is not available.

INDEX OF HOME WORKERS PAYROLL IN FIRST 9 MONTHS OF 1932, 1933, and 1934. 1932=100

Period	Payroll	Index
Jan-Sept. 1932	$343,691	100
" " 1933	437,670	127.3
" " 1934	383,333	111.5

B. FACTORY WORKERS PAYROLL

Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
1932	$26,468	$28,676	$28,577	$30,266	$113,987
1933	25,917	28,041	43,762	52,475	150,195
1934	29,344	32,932	26,206	1/	88,482

Indices of trend - 1932 = 100

1932	100	100	100	100	100
1933	97.9	97.8	153.1	173.4	131.8
1934	110.9	114.8	91.7	-	-

1/ Payroll for the 4th Quarter 1934, is not available.

INDEX OF FACTORY WORKERS PAYROLL IN FIRST 9 MONTHS
OF 1932, 1933, and 1934. 1932=100

Period.	Payroll	Index
Jan-Sept. 1932	$83,731	100
" " 1933	97,730	116.7
" " 1934	88,482	105.7

May 2, 1935.

Mr. Victor E. Domenech,
Chair, The Code Authority for the
Needlework Industry in Puerto Rico,
Mayaguez, Puerto Rico.

My dear Mr. Domenech:

This is to acknowledge the receipt of your letter of April 26 in which you requested information regarding the present status of the complaint filed by the Code Authority for the Needlework Industry in Puerto Rico against imports from China of hand-made and hand-embroidered handkerchiefs.

As you know, this complaint was filed in October, 1934, after a very short period of operation under the Code. Likewise, the basis of the complaint was in a large measure the anticipated effect on the competitive position of the Puerto Rican Industry of the $3 weekly minimum wage for home workers.

A survey of import statistics at the time the complaint was filed indicated that total embroidered linen handkerchief imports for the first nine months of 1934 exceeded the quantity of imports for the corresponding period of 1933 by 30 percent. However, the imports in the first nine months of 1934 were below the levels of 1931 and 1932 by 48 percent and 9 percent, respectively.

In order to submit a report to the President in accordance with the terms of Section 3(e) of the National Industrial Recovery Act, it is necessary to show the ratio of imports to domestic production. The official statistics of handkerchiefs shipments from Puerto Rico to the mainland show a steady increase from 1931 to 1934 and shipments for the first nine months of 1934 exceeded shipments for the corresponding period of 1931 by 116 percent. Furthermore, shipments of linen handkerchiefs (the class the most comparable with the imports complained of) increased 62.7 percent in the first nine months of 1934 over the corresponding period of 1933.

Clearly, if official data of shipments between Puerto Rico and the mainland were to be used as the equivalent of Puerto Rican production, it would be difficult to establish an increasing ratio of imports to domestic production. Likewise, there is evidence that the volume of production in Puerto Rico has been several times larger than the volume indicated by official statistics.

In order to determine what portion of the Puerto Rican production was competitive with imports from China, and in order to

estimate the volume and trend of production of these competitive items, it was necessary to request information from mainland concerns which had handkerchiefs manufactured in whole or in part in Puerto Rico. Several important operators were slow in submitting the information requested.

Pending the collection of these data, the piece rates paid to home workers were revised downwards. Obviously, this exemption to the $2 minimum weekly wage provisions (effective January 8, 1935) affects the competitive position of the Puerto Rican industry.

For this reason, I am suggesting that you submit information regarding payrolls and production for the fourth quarter of 1934 and the first quarter of 1935. The return may be consolidated but the names of the firms submitting data to your office should be indicated. The attached form is for your convenience in making this return.

Upon receipt of definite information regarding the recent effects of the operation of the Code in Puerto Rico, this office will be in a position to expedite the complaint.

Very truly yours,

M.D.Gresham,
Chief, Import Section,
Research and Planning Division.

Enclosure.

Payroll and Production Statistics for the Handkerchief Industry in Puerto Rico

Name of contractor	Payroll for handkerchief workers		Handkerchiefs finsihed in each quarter
	Factory workers	Home workers	
4th Quarter, 1934			
1.			
2.			
3.			
4.			
5.			
1st Quarter, 1935			
1.			
2.			
3.			
4.			
5.			

HORSESHOES (No. 33)

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SURVEY OF INFORMATION

ON

HORSESHOES

March, 1935

Complainant's Status under the National Industrial Recovery Act

This is a report on a complaint under Section 3 (e) of the National Industrial Recovery Act with respect to imports of horse or mule shoes, filed by the Code Authority of the Horseshoe and Allied Products Manufacturing Industry in accordance with the provisions of Article IX of the Code of Fair Competition for the industry, approved March 8, 1934; this section provides that, "the said Code Authority is also established as an Agency of the Industry for the purpose of investigating and informing the Administrator as to the importation of competitive commodities into the United States.. .. and as an Agency for making complaint with respect thereto, to the President, on behalf of the said industry ....."

Commodity and Tariff Status

Horse or mule shoes, specified in this complaint, are made of wrought iron or steel. Imports are almost exclusively the common variety of flat shoes, dutiable at one-fifth of 1 cent per pound under Paragraph 313 of the Tariff Act of 1930; they were dutiable at the same rate in the Act of 1922. Wrought iron or steel horseshoes with adjustable or turned calks are dutiable at 1 cent per pound; there are practically no imports of these special types.

The Domestic Industry

According to reports of the Bureau of the Census, the number of horseshoes manufacturing establishments declined from 26 in 1923 to 9 in 1929 and to 8 in 1933. This decline resulted from two causes: (1) the decreasing consumption of horse and mule shoes in the United States, and (2) the consolidation of competing establishments. The complainants state that only four companies, operating five plants, are now engaged in the manufacture of the common type horse or mule shoes specified in this complaint. The remaining companies manufacture only special types of horseshoes and calks.

The largest company in the industry operates two plants, both of which are advantageously located with respect to supplies of raw material and to important consuming markets. One of these plants is located within the Chicago-Gary steel producing district, and is the only horseshoe manufacturing establishment west of the Appalachian Mountains. The other plant is located not far from Bethlehem, Pa., another important steel producing center.

The three smaller manufacturers, which operate one plant each, are located at Richmond, Va.; Troy, N. Y.; and Wareham, Mass.

The manufacture of horseshoes amounts to about 20 and 50 per cent, respectively, of the business of two companies in the industry which together are responsible for somewhat less than 15 per cent of the domestic output. A third company, which produces about 5 per cent of the domestic output, is exclusively engaged in the manufacture of horseshoes. The fourth and largest company, which produced over 75 per cent of the total output in 1933 and 1934, is almost exclusively engaged in the manufacture of common horseshoes; less than 5 per cent of its output consists of special types of horseshoes and equipment.

Table 1 shows the distribution of production among the four complainant companies in the domestic industry. It may be noted that the principal company increased its share from 58 per cent of the total output in 1929 to 81 per cent for the first nine months of 1934. The share of the next largest company declined from 17 per cent in 1929 to 10 per cent in 1933 and 1934, and the share of the two other producers was less in 1934 than in either 1933 or 1931.

Table 1. - Distribution of horse or mule shoe production among companies

Company number	1929	1931	1933	1934 (9 months)
	Per cent of total	Per cent of total	Per cent of total	Per cent of total
1	58	65	76	81
2	17	14	10	10
3	1/ 6	7	6	5
4	5	6	6	4
All others	14	8	2	0
Total	100	100	100	100

1/ Production based upon sales. This plant was sold in 1930 to company No. 1, but was purchased by a new company which began operation in late 1930.

On the basis of data submitted with the complaint, it appears that average employment in the horseshoe manufacturing industry in 1933 was somewhat less than 500 workers and total wages for that year amounted to about $450,000.

Production

Data from the Bureau of the Census, shown in Table 2, indicate that the production of horse or mule shoes in the United States declined from about 81 million in 1925 to 29 million in 1931, but rose to somewhat over 31 million pounds in 1933.

Table 2. - Total United States production of horse or mule shoes by census years, 1925-1933

Year	Horse or mule shoes			Horse or mule shoe calks
	Quantity	Value	Average unit value	Value
	1,000 pounds	1,000	Per 100 Pounds	1,000
1925	81,273	$4,218	$5.19	$1,109
1927	79,537	4,812	6.05	870
1929	41,716	2,664	6.39	539
1931	29,354	1,429	4.87	251
1933	31,140	1,298	4.17	221

Source: Census of Manufactures.

Sales

Table 3 shows the trend of the quantity, value, and unit value of sales by the four complainant companies from 1931 to 1934. Sales by these companies reached their lowest point in recent years during 1934.

Table 3. - Reported sales of horse or mule shoes by four companies, 1931-1934

Year	Quantity	Value	Average unit value
	1,000 pounds		per 100 pounds
1931	34,615	$1,960,197	$5.66
1932	25,966	1,706,857	6.57
1933	28,059	1,743,039	6.21
1934	25,073	1,590,485	6.34

Stocks

Table 4 shows year-end stocks of horse or mule shoes held by the four complainant companies for the years 1931 to 1934. From this table it may be noted that stocks on hand rose about 12 per cent from 1933 to 1934, the highest level for the four-year period.

Table 4. - Reported year-end stocks of horse or mule shoes for four companies, 1931 - 1934

Year	Reported stocks of four companies		
	Quantity	Value	Average unit value
	1,000 pounds		Per 100 pounds
1931	14,590	$611,443	$4.19
1932	13,017	517,080	3.97
1933	13,108	510,697	3.90
1934	14,762	604,278	4.09

Exports

Exports of horse or mule shoes, which go mainly to the Philippine Islands and Canada, declined from about 2 per cent of domestic production in 1925 to less than 1 per cent in 1932. Since 1932 they have gained somewhat, rising to 1.4 per cent of the domestic output in the first nine months of 1934. The average unit value of these exports declined from $7.30 per 100-pound keg in 1925 to $6.19 in 1932, and to $5.25 in 1934. Table 4 compares the trends of the quantity, value, and average unit value of exports since 1925. Exports probably include some relatively high-priced special type horseshoes.

Table 5. - Trend of exports of horse or mule shoes

Year	Quantity	Value	Average unit value
	1,000 pounds		Per 100 pounds
1925	1,587	$115,872	$7.30
1927	1,289	90,699	7.04
1929	985	68,726	6.98
1931	342	21,128	6.18
1932	225	13,935	6.19
1933	323	22,909	7.10
1934	390	20,452	5.25

Imports

Imports consist almost entirely of common horseshoes which differ in no important respect from the domestic product; they are shipped in standard 100-pound kegs.

Germany supplied 71 per cent of the horseshoe imports in 1933 and 93 per cent in 1934.

Table 6 shows the trend of the quantity, value, and average unit value of import from 1930 to 1934, inclusive. It will be noted that imports declined from a peak of 1,948,000 pounds in 1924 to an average of about 30,000 pounds annually for the years 1926 to 1931, inclusive, and then rose to 371,000 pounds in 1932, to 781,000 pounds in 1933 and to 965,000 in 1934. The average unit value of imports declined to a low point in 1932, but rose to the 1929 level in 1934.

Table 6. - Trend of imports of horse or mule shoes

Year	Quantity	Value	Average unit value
	1,000 pounds		Per 100 pounds
1920	44	$3,496	$7.99
1924	1,948	87,408	4.49
1925	130	5,971	4.59
1926	2	132	6.56
1927	30	1,754	5.82
1928	19	787	4.15
1929	60	2,441	4.08
1930	32	1,344	4.14
1931	40	1,533	3.87
1932	371	13,531	3.64
1933	781	29,421	3.76
1934	965	39,325	4.08

Source: Foreign Commerce and Navigation of the United States

Table 7 shows the distribution of imports for consumption among various customs districts in 1933 and 1934. From this table it will be noted that there was a sharp decline in entries at New York and a considerable increase in southern districts in 1934 as compared with 1933.

Table 7. - Imports for consumption into various customs districts in 1933 and 1934

Customs district	Quantity		Unit value		Percentage distribution	
	1933	1934	1933	1934	1933	1934
	Pounds		Per 100 pounds			
New York	328,644	147,426	$3.83	$4.47	41.5	15.3
Philadelphia	-	10,590	-	3.51	-	1.1
Virginia	97,741	124,317	3.72	4.31	7.3	12.9
South Carolina	66,600	203,400	3.65	3.92	8.4	21.1
Georgia	253.400	288,200	3.78	3.64	32.0	29.9
Florida	-	5,500	-	3.58	-	.6
Mobile	13,000	52,500	3.65	3.60	1.6	5.4
New Orleans	-	104,489	-	4.72	-	10.8
Galveston	-	15,500	-	5.40	-	1.6
Puerto Rico	73,280	3,042	4.00	6.64	9.2	.3
District not given	-	10,000	-	3.62	-	1.0
Total - United States	792,665	964,964	3.80	4.08	100.0	100.0

Comparison of Imports with Domestic Production and Sales

Table 8 shows a comparison of the trend of imports with the total production, production in the eastern area, and sales reported by four complainant companies.

Table 8. - Comparison of imports with total production, Production in the eastern area, and domestic sales.

Period	Imports	Reported by four companies: Production: Total	Production: In eastern area	Sales: Total	Ratio of imports to - Production: Total	Production: In eastern area	Sales: Total
		Thousand pounds			Per cent		
1929	60	1/ 35,931	1/ 14,110	2/	0.17	0.43	3/
1931	40	26,790	15,615	34,615	.15	.26	0.12
1932	371	25,180	13,946	25,966	1.47	2.66	1.43
1933	781	30,530	13,350	28,059	2.56	5.85	2.78
1934	965	3/	3/	25,073	3/	3/	3.85
1934							
Jan.-Sept.	698	21,180	8,509	3/	3.30	8.20	3/
Jan.-Mar.	149	8,854	3,151	3/	1.68	4.73	3/
Apr.-June	370	8,864	3,177	3/	4.17	11.64	3/
July-Sept.	179	3,462	2,181	3/	5.17	8.21	3/

1/ Production of one company based on sales.
2/ Sales of two of the four companies amounted to 37,528,000 pounds during this year.
3/ Not available.

From the foregoing table it may be noted that the ratio of imports to total production rose from less than 1 per cent in 1929 and 1931 to roughly 2½ per cent in 1933; and that after the adoption of the code by the horseshoe manufacturing industry, the ratio increased to somewhat over 5 per cent of total domestic production. The ratio of imports to production by the four plants located east of the Appalachian Mountains rose from somewhat less than 6 per cent in 1933 to over 10 per cent in the six-month period following the adoption of the code in March, 1934.

Competitive Factors

Decline in consumption

The decline in the domestic consumption of horseshoes has been in large measure a result of the displacement of horses by automobiles, trucks, and tractors. The decline in the horse and mule population in the United States, however, has been much less than the decline in the consumption of horseshoes; this is indicated by the data shown in Table 9.

Table 9. - Comparison of trend in the population of horses and mules with the consumption of horseshoes

Year	Total Number of horses and mules 1/	Indicated horse and mule shoe consumption 2/	Index of - Total number of horses and mules	Index of - Indicated horse and mule shoe consumption
	1,000	1,000 pounds	1923 = 100	
1923	25,589	125,324	100	100
1925	23,738	79,816	93	64
1927	22,057	78,278	86	62
1929	20,245	40,793	79	33
1931	18,745	29,052	73	23
1933	17,531	31,598	69	25

1/ Horses and mules on farms plus estimated number in cities based upon census figures of 2,084,000 in 1920 and 375,000 in 1930. Agriculture Yearbook, 1934.

2/ Domestic production plus imports, minus exports.

The number of horses and mules on farms declined 6,698,000 from 1920 to 1930, while the number in cities is estimated to have declined 1,709,000 during the same period. With reference to the consumption of horseshoes, the decline in the number of horses in cities was probably of much greater importance than the decline in the number on farms, for the reason that horseshoes wear out more rapidly on hard-surfaced or paved streets.

The available production statistics do not indicate accurately the consumption of horseshoes in the United States in recent years for the reason that a number of companies in the industry were liquidated during the years 1922 to 1930 and their accumulated stocks were sold in subsequent years. For example, one of the complainant companies sold 35 million pounds in 1929, although it produced only 24 million, and 27 million in 1931, when its production was only 19 million.

A further factor of importance in the declining consumption of horseshoes is the effect of the agricultural depression in curtailing the purchasing power of farmers. A comparison of the trend of farm prices of agricultural products with the indicated mill prices of horseshoes for census years from 1925 to 1933 indicates that, on the basis of the relationship existing in 1925, the price of horseshoes was 86 per cent higher than farm prices in 1933. The rise in cost of horseshoes in terms of farm products has undoubtedly tended to decrease their consumption.

The consumption of common horseshoes, which require fitting by blacksmiths, has been affected by competition from special type shoes and calks, produced to some extent by the complainants but principally by other companies. For example, the special type screw and drive calk shoes are constructed so that the calks may be replaced from time to time as they wear out. Replaceable toe calks may also be attached to

standard shoes or replaced without welding. Likewise, rubber shoes and pads may be used with standard iron shoes or in combination with iron toe calks to give maximum protection against slipping and to eliminate noise; they are also replaceable. Special type shoes and calks, therefore, compete with standard horseshoes by prolonging wear and by eliminating to a considerable extent the necessity for and the cost of fitting by blacksmiths.

Prices

The complainants have submitted data showing the trend of delivered prices at various points where import competition is claimed to be severe. These data indicate that prices were not, on the average, reduced from 1929 to 1932. In July, 1932, a small company in Massachusetts reduced its price for delivery in southern territory by $1.03 per 100 pounds. In January, 1933, the New York producer lowered the New York City price $1 per 100 pounds and the Philadelphia price $1.55. The largest producer followed in July with a price reduction of $1 for delivery at New York City and Atlanta, Ga. These lower prices were maintained until April, 1934, when the pre-depression level was restored by all producers. No data were submitted for prices in districts west of the Appalachian Mountains. The statistics, however, indicate that the average decline in the value of output at the mill for all producers after 1929 was considerably greater than the reduction in delivered prices in the eastern area.

Table 10 presents a comparison of the trends in the various prices submitted by the complainants.

Table 10. - Comparison of trend in the delivered prices of horseshoes at various points of competition with imports

Company number 1/	Delivered price per 100 pounds at -						
	New York		Philadelphia	Atlanta	Southern points	Richmond 2/	Average
	1a	2	2	1b	3	4	
1929							
April	$6.60	$6.61	$6.59	$6.87	-	$6.30	$6.60
1932							
January	6.62	6.61	6.39	6.89	$6.93	6.05	6.62
April	6.62	6.59	6.55	6.89	6.93	6.04	6.60
July	6.62	6.63	6.55	6.89	5.90	6.09	6.45
October	6.62	6.63	6.55	6.89	5.90	6.10	6.45
1933							
January	6.62	5.63	5.00	6.89	5.90	6.02	6.01
April	6.62	5.63	5.00	6.89	5.70	5.12	5.83
July	5.62	5.63	5.00	5.89	5.70	5.94	5.63
October	5.60	5.63	5.00	5.87	5.70	5.96	5.63
1934							
January	5.60	5.63	5.00	5.87	5.70	5.95	5.62
April	6.60	6.60	6.56	6.87	6.65	6.72	6.67
July	6.60	6.60	6.56	6.87	6.63	6.91	6.70

1/ Company number - 1a located at Catasauqua, Pa.; 1b at Joliet, Ill.; 2 at Troy, N. Y.; 2 at Wareham, Mass.; and 4 at Richmond, Va.
2/ F.o.b. shipping point.

Table 11 shows the average unit value of annual sales of horseshoes as submitted by four companies.

Table 11. - Average price per 100-pound keg of annual sales of horseshoes by four companies

Year	Company number				Average four companies
	1	2	3	4	
1931	$5.41	$6.52	$6.76	$6.66	$5.66
1932	6.64	6.50	5.93	6.33	6.57
1933	6.27	6.19	5.53	6.14	6.21
1934	6.41	6.49	5.27	6.58	6.34

It will be noted that company No. 1, increased its price 23 per cent between 1931 and 1932. This rise in price was accompanied by an 18 per cent drop in the quantity of sales made by this company, and by a sharp increase in the volume of imports. An inverse relationship between the volume of sales and prices is indicated by statistics for the other three companies. The clearest case is that of company No. 3, which lowered its price slightly each year after 1931 and increased its sales steadily,

while the sales of its three competitors declined an average of 30 per cent. From 1933 to 1934 the price charged by this company was lowered 5 per cent, while the average price quoted by its competitors rose 3 per cent, a difference in 1934 of $1.16 per keg. At this lower price company No. 3. increased its sales 18 per cent as compared with a 23 per cent increase in imports from 1933 to 1934.

Effect of Exchange Fluctuations

The rise in the dollar value of the German mark since April, 1933, has made it increasingly difficult for German products, including horseshoes, to be sold in the United States. However, while outwardly maintaining the gold value of the reichsmark at par, the German Government has resorted to foreign exchange control measures which have had much the same effect as currency depreciation. Special concessions have been made to exporters for the purpose of promoting sales in foreign markets which otherwise would have been closed to German products. The principal methods by which exports have been encouraged are as follows:

(1) By an arrangement enabling the German exporters to realize profit by accepting part payment in the form of German bonds which could be purchased in foreign markets at considerably below the German market price.

(2) By making exchange available to German exporters at considerable discount derived from "blocked" accounts of foreign creditors in German banks.

(3) After October 1, 1933, by making exchange available to German exporters, at discounts ranging as high as 50 per cent, from a special fund of "blocked exchange" created in connection with a government monopoly of foreigh exchange.

Table 12 shows a comparison of the trend in the dollar value of the reichsmark with the average unit value of imports of horseshoes from Germany during 1933 and 1934.

Table 12. - Comparison of the trend in the dollar value of the reichsmark with the average unit value of imports of horses from Germany

Statistical period	Average unit value of imports per 100 pounds	Exchange rate Cents	Index of - Unit value of imports Jan.-Mar., 1933 = 100	Index of - Exchange rate Jan.-Mar., 1933 = 100
1933				
Jan.-Mar.	$3.58	1/ 23.82	100	100
Apr.-June	3.50	26.85	98	113
July-Sept.	3.83	33.80	107	142
Oct.-Dec.	4.11	37.00	115	155
1934				
Jan.-Mar	3.61	38.71	101	163
Apr.-June	4.12	39.12	115	164
July-Sept.	3.83	39.42	107	165
Oct.-Dec.	4.61	40.28	129	169

1/ January-March exchange at par.

The fact that the average unit value of imports of horseshoes from Germany increased very little from the beginning of 1933 to the third quarter of 1934, while the exchange value of the reichsmark in terms of dollars rose 65 per cent, indicates that German exporters have in fact benefitted by some form of exchange subsidy sufficient to offset the disadvantage which would otherwise have been caused by the revaluation of the United States dollar. It thus appears that the dollar exchange value of the reichsmark may have little or no significance as an indication of increased disadvantage in the sale of German horseshoes in the United States.

Effect of the Recovery Program

Data submitted by the complainants indicate that direct labor costs, which accounted for 28 per cent of total costs, increased 16 per cent after the adoption of the code. The cost of materials, which amounted to 23 per cent of total costs, increased 31 per cent; other costs increased approximately 13 per cent. As shown in Table 13 a comparison of weighted average costs for the industry before and after the adoption of the code indicates an increase in total costs, exclusive of selling expense, of 18 per cent.

Table 13. - Weighted average cost of producing horseshoes before and after code

(Per 100 pounds)

Cost item	Before code		After code		Increase		
	Cost	Per cent of total	Cost	Per cent of total	Cost	Per cent	Per cent of total
Materials	$1.02	23	$1.34	26	$0.32	31	41
Labor	1.24	28	1.44	28	.20	16	26
Factory expense	.88	20	1.00	20	.12	13	15
Depreciation	.21	5	.22	4	.01	4	1
General and administrative expense	.46	11	.52	10	.06	13	18
Total	3.81	87	4.52	88	.71	18	91
Selling expense	.55	13	.62	12	.07	13	09
Total including selling expense	4.36	100	5.14	100	.78	18	100

Although the cost of production data indicate that labor costs advanced 16 per cent after the code, the employment and payroll data submitted by the complainants reveal little or no increase in the average hourly wage, and only a slight advance in the average weekly wage rate. Table 14 summarizes the employment and payroll data for periods before and after the code.

Table 14. - Comparison of trend of employment and payrolls in the horseshoe manufacturing industry

Period	Total reported for one week in period indicated				
	Number of workers	Amount of payroll	Total hours worked	Weekly wages	Hourly wages
1929	581	$13,907	27,920	$23.94	$0.50
1932	575	8,829	20,332	15.35	.43
1933					
January	376	4,748	9,999	12.63	.47
April	337	7,480	14,208	22.20	.53
July	578	10,725	23,485	18.56	.46
October	480	8,970	17,656	18.69	.51
1934					
January	639	12,766	24,291	19.98	.53
Code - - - - - - - - - - - - - - - - Approved March 8 - - - - - - - - - -					
April	627	12,771	24,812	20.37	.51
July	615	12,305	24,122	20.01	.51

Source: Data supplied by complainants.

The code of the horseshoe manufacturing industry provides a minimum wage of 40 cents per hour in the North and 30 cents per hour in the South, and limits the normal week to 40 hours. These provisions had little effect upon the costs of the horseshoe manufacturers for the reason that the plants had been operating on a 40 hour per week schedule prior to the code and were paying wages considerably in excess of the minimum. The relatively high level of wages in the industry is accounted for in part by the fact that the majority of the workers in the industry are unionized.

PIG IRON (No. 43)

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SURVEY OF INFORMATION

ON

PIG IRON

March, 1935

Commodity and Tariff Treatment

Description of commodity

Pig iron is described by the American Iron and Steel Institute as "a metallic product, the result of blast furnace or electric smelting of iron ores, which is used as part or all of the initial metallic charge in steel making, puddling (the point of departure in process between the manufacture of wrought iron and of steel), and producing molten metal for foundry use (casting)." It is produced by smelting iron ore with carbonaceous fuel and a flux (chiefly limestone) in blast furnaces.

Of the total domestic output of pig iron, less than one-fourth in the past has been produced for sale; more than three-fourths has been produced by large integrated companies for further use in the manufacture of iron castings, steel, and wrought iron.

Domestic "merchant" pig iron, - i.e., produced for sale, - which is the subject of this report, consists chiefly of (1) foundry iron which is characterized by a silicon content of from 1.25 to 3.25 per cent, (2) malleable iron which is characterized by a phosphorus content not exceeding 0.20 per cent, and (3) minor quantities of forge iron, used largely in the manufacture of wrought iron.

Gas and coke are the principal fuels used in the manufacture of pig iron, having almost entirely displaced charcoal. In fact, there are now only five blast furnaces in the United States which are designed for the production of charcoal iron.

Tariff treatment

Pig iron is dutiable under Paragraph 301 of the Tariff Act of 1930 at $1.12½ per long ton (or gross ton as it is known to the industry). The Tariff Act of 1922 originally provided a specific rate of duty of 75 cents per ton. As the result of an investigation by the Tariff Commission under Section 315 of that Act, the duty was increased by Presidential proclamation, March 24, 1927, to $1.12½ per ton, which rate was made statutory in the Act of 1930. A similar investigation by the Tariff Commission in 1931 resulted in no change of duty.

The ad valorem equivalent of the duty under the Tariff Act of 1922 averaged approximately 4 per cent; the duty of $1.12½ per ton made effective by Presidential proclamation in 1927, and continued in the Tariff Act of 1930, averaged around 7 per cent ad valorem prior to 1930; on account of lower prices it was over 12 per cent in 1933. As a result of an upward turn in prices, it declined to somewhat over 8 per cent for the year 1934.

The Domestic Industry

Location

The pig iron industry of the United States is located almost entirely east of the Mississippi River, generally centered at or near the production centers for steel, wrought iron, and cast iron products. The greatest pig iron producing area of the United States embraces western Pennsylvania, eastern Ohio, and West Virginia. Probably the second area in importance is the eastern part of Pennsylvania and Sparrows Point, Md. Another important pig iron producing region is centered in and around Birmingham, Ala., a district which, although somewhat distant from the markets for finished iron and steel products, enjoys the natural advantage of large deposits of iron ore, limestone, and coking coal within short distances from the blast furnaces. A fourth major pig iron producing area is located in northern Indiana and Illinois; and more recently Michigan has attained relative importance as a pig iron producing State. In addition, there are two pig iron producing areas in New York State, one in the vicinity of Buffalo, and the other in the northeastern part of the State.

Types of producers

The domestic industry may be roughly classified by types of producers as follows: (a) steel manufacturers who consume their entire output of pig iron; (b) manufacturers of cast iron, wrought iron, and steel, who attempt to merchandise the pig iron produced in excess of their requirements; and (c) pig iron producers who are entirely dependent upon sales for the disposal of their output of pig iron.

Capacity

The total domestic pig iron capacity in 1933 was 240 blast furnaces (excluding furnaces which had been long idle and those which produce ferro alloys) whose rated capacity was more than 50 million gross tons per annum. Table 1 shows the distribution of domestic pig iron capacity by States.

Table 1.

Annual blast furniace capacity of the United States*

State	Pig iron capacity in 1933		Number of blast furnaces		Per cent of total number	
	Gross tons 1/	Per cent of total	1933 2/	1934 3/	1933	1934
	Thousands					
Total	50,322	100.0	275	258	100.0	100.0
Massachusetts	175	.3	1	1	6/	6/
New York	3,477	6.9	19	18	6.9	7.0
Pennsylvania -	16,985	33.8	93	82	33.8	31.8
Eastern	4/2,713	5.4	19	5/	6.9	
Other	4/14,272	28.4	74	5/	26.9	
Maryland	1,663	3.3	6	6	2.2	2.3
Virginia	90	.2	6	5	2.2	1.9
West Virginia	803	1.6	3	3	1.1	1.2
Kentucky	256	.5	2	2	6/	6/
Tennessee	180	.4	6	4	2.2	1.5
Alabama	3,075	6.1	25	25	9.1	9.7
Ohio	11,346	22.5	55	53	20.0	20.5
Illinois	5,561	11.1	25	25	9.1	9.7
Indiana	5,058	10.1	18	18	6.5	7.0
Michigan	875	1.7	8	8	2.9	3.1
Minnesota	113	.2	3	3	1.1	1.2
Missouri	1/	1/	1	1	6/	6/
Colorado	493	1.0	3	3	1.1	1.2
Utah	172	.3	1	1	6/	6/
All other	-	-	-	-	1.8	1.9

*Compiled from statistical reports of the American Iron and Steel Institute.

1/ Does not include capacity of blast furnaces which have long been inactive or are likely to remain inactive.

2/ Includes all blast furnaces whether producers of coke or charcoal pig iron, or ferro alloys.

3/ As of June 30, 1934.

4/ Special communication of American Iron and Steel Institute.

5/ Not available.

6/ Less than 1 per cent; included in "All other."

Area of import competition

Because of the high cost of inland freight, pig iron produced more than approximately 100 miles inland does not enter directly into competition with imports. Import competition, however, is an important factor in the areas of consumption along the Atlantic seaboard and the vicinity of Buffalo, N. Y. The former area is supplied by nearby domestic producers and by producers in the Alabama district who ship by water to eastern centers of consumption. The rated capacity of the producing areas which compete with imports is approximately 11 million gross tons per annum, or about 22 per cent of the total pig iron capacity of the United States.

Of the total pig iron capacity of the producing area in which competition from imports is encountered, approximately 50 per cent, or 5.5 million gross tons, is normally available for merchant production. of the 20 producers in this area, eight (combined merchant capacity over 3 million gross tons per annum) are either operating units or subsidiaries of steel companies; two (combined capacity over 250,000 tons) are subsidiaries of producers of cast iron products; at least one is a producer of wrought iron; and the status of three other producers is not clearly indicated from available information. The remaining six, whose combined capacity is 1,287,000 tons, or 23.4 per cent of the total merchant capacity of this area, are entirely dependent upon sales for the disposal of their pig iron output.

The complainant producers

The complaint which is the subject of this report was submitted for 12 producers having 24 blast furnaces situated by States as follows: Massachusetts, 1; New York, 9; Pennsylvania, 7; Virginia, 1; and Alabama, 6. Their combined annual blast furnace capacity on December 31, 1933, was 8,765,436 gross tons, or 17.4 per cent of the total pig iron blast furnace capacity of the United States. Their capacity for production of merchant pig iron was 4,400,828 gross tons per annum, or 50.8 per cent of their total capacity. Of the 12 complainant producers, five are either integrated steel producers of subsidiaries thereof, and thus are not entirely dependent upon sales for the disposal of their pig iron output. Five complainants, having a combined capacity of 1,137 gross tons, or 13.0 per cent of aggregate pig iron capacity of the complainants, are entirely dependent upon sales for disposal of their pig iron output. Of these, two are subsidiaries of fuel companies, but their blast furnaces have not operated since 1931; one other, which also produces coal-tar derivatives, has produced pig iron more or less consistently throughout the depression. Available information with respect to the operations of two other producers is indefinite.

of the nine producers who submitted data in support of this complaint, one producer has not been at all active, and three have not operated since 1931. Of the remaining five, only two were active throughout the year 1932; two were in operation during the first quarter only, and one other producer operated only during the last quarter of that year.

During the first six months of 1933, immediately prior to the adoption of the code, only two producers were active. From July to December, however, all of the complainants were in blast, excepting the three who had not operated since 1931.

During the first six months of 1934, four of the producers were in continuous operation, one operated irregularly, and another suspended operations in February. During the third quarter, four producers were in continuous operation, one continued idle, and one suspended operations during August. During the month of October, the last month for which data were submitted, only three producers were active.

Table 2 compares the production of the reporting complainants with the total merchant production of pig iron in the States in which they operate.

Table 2.

Comparison of pig iron production by reporting complaints with total merchant production in the States in which they operate*, 1931-1934

	Merchant production (North Atlantic States 1/ and Alabama 2/	Production as reported by complaintants	Ratio of reported production to merchant production in States in which complaintants operate
	Gross tons		Per cent
Years			
1931	2,007,838	1,027,562	51.2
1932	887,804	408,292	46.0
1933	1,232,936	476,607	38.7
1934	1,626,046	3/	
Quarters			
1932			
First	347,818	118,949	34.2
Second	201,681	96,799	48.0
Third	119,017	90,623	76.1
Fourth	219,288	101,921	46.5
1933			
First	122,559	49,628	40.5
Second	177,195	65,928	37.2
Third	467,993	159,272	34.0
Fourth	465,189	201,779	43.4
1934			
First	425,704	183,006	43.0
Second	547,692	181,491	33.1
Third	361,425	171,981	47.6
Fourth	291,185	3/	

*Compiled from monthly reports appearing in Steel and data supplied individually by nine complainants.

1/ Does not include Massachusetts, Virginia, and Maryland which could not be segregated.

2/ Includes indeterminate quantities of ferromanganese and spiegeleisem.

3/ Reports of complainants not complete.

Course of Domestic Production

Pig iron production compared with general manufacturing

From 1924 through 1929 the daily average domestic output of pig iron ranged between 100,000 and 116,000 tons per day. During those years the index of daily output moved in relatively close harmony with the index of general manufacturing. After 1929, however, pig iron output declined to a much greater degree than did general manufacturing, reaching a low point in 1932 of somewhat less than 24,000 tons per day, or 24 per cent of the 1923-25 average, as compared with the low point of 63 per cent in that year for the index of manufacturing. The index of pig iron output rose to 37 in 1933 and to 45 in 1934, as compared with 75 and 78, respectively, in those years for the general index of manufacturing. Table 3 shows a comparison of average daily output of pig iron with the index of manufactures compiled by the Federal Reserve Board.

Table 3.
Comparison of index of daily average production of pig iron with general index of manufacturers

Year	Daily average output of pig iron		General index of manufactures 2/
	Gross tons 1/	Index	
			(1923-1925= 100)
1926	107,126	109	108
1927	99,422	101	106
1928	103,365	105	112
1929	115,808	118	119
1930	86,141	88	95
1931	50,035	51	80
1932	23,699	24	63
1933	36,223	37	75
1934	43,774	45	78
Quarters			
1933			
First	18,487	19	61
Second	30,559	31	80
Third	55,897	57	90
Fourth	39,504	40	71
1934			
First	45,800	47	81
Second	62,973	64	87
Third	34,650	35	71
Fourth	31,924	32	74

1/ Steel, January 7, 1933.
2/ Federal Reserve Board - unadjusted.

Total for Sale, and makers' Use

The course of domestic production of pig iron from 1920 to 1933, inclusive, as published by the American Iron and Steel Institute, is shown in Table 4. It may be noted that, with the exception of 1920, the share of domestic production which was offered for sale reached its highest level in 1924; a secondary peak was reached in 1927. Since that year, the trend of the ratio of merchant production to total production of pig iron was downward until 1933 when only 15.9 per cent of the total production of this commodity was offered for sale. In 1934, there was a slight recovery in the ratio of production for sale to total production.

Table 4. - Domestic production of pig iron*, 1920-1934

Year	Total production	Production		Ratio to total production	
		For sale	For makers' use	For sale	For makers' use
	Thousands of gross tons			Per cent	
1920	36,244	10,243	26,001	28.3	71.7
1921	16,399	3,570	12,829	21.8	78.2
1922	26,825	6,232	20,593	23.2	76.8
1923	39,721	10,106	29,615	25.4	74.6
1924	30,875	8,058	22,817	26.1	73.9
1925	36,116	8,587	27,529	23.8	76.2
1926	38,698	9,288	29,410	24.0	76.0
1927	35,858	8,978	26,880	25.0	75.0
1928	37,402	7,724	29,678	20.7	79.3
1929	41,757	9,014	32,743	21.6	78.4
1930	31,021	6,567	24,454	21.2	78.8
1931	17,958	4,000	13,958	22.3	77.7
1932	8,550	1,714	6,836	20.0	80.0
1933	13,001	2,068	10,933	15.9	84.1
1934*	15,972	2,755	13,217	17.2	82.8

(*) Compiled from American Iron and Steel Institute - Annual Statistical Report, 1933.

(**) Compiled from monthly reports in Steel; includes ferromanganese and spiegeleisen which were impossible to segregate.

Total production by grades

Table 5 shows the course of domestic production of pig iron and its distribution between the two principal "use" grades, i.e., steel making and casting iron grades. The steel making grades include Bessemer and low-phospherus iron. The casting grades include foundry, malleable, and forge iron. It will be noted that the proportions have shifted from approximately 80 per cent steel making grades and 20 per cent casting grades, during the period 1920 to 1928, to over 85 per cent and somewhat less than 15 per cent, respectively, in recent years.

Table 5. - Total domestic production of pig iron by grades, 1920-1934* 1/

(In thousands of gross tons)

Year	Total	Steel making grades	Casting grades	All other	Steel making grades	Per cent of total Casting grades	All other
1920	36,244	28,800	7,352	92	79.5	20.3	0.2
1921	16,899	13,348	3,027	24	81.4	18.5	.1
1922	26,825	21,654	5,108	63	80.7	19.0	.3
1923	39,721	31,473	8,147	101	79.2	20.5	.3
1924	30,975	24,171	6,652	52	78.3	21.5	.2
1925	36,116	29,087	6,978	51	80.5	19.3	.2
1926	38,698	31,211	7,405	62	80.7	19.1	.2
1927	35,858	28,463	7,348	47	79.4	20 5	.1
1928	37,402	31,139	6,221	42	83.3	16.6	.1
1929	41,757	34,789	6,927	41	83.3	16.6	.1
1930	31,021	25,708	5,245	68	82.9	16.9	.2
1931	17,958	14,810	3,116	32	82.5	17.3	.2
1932	8,550	7,295	1,233	22	85.3	14.4	.3
1933	13,001	11,426	1,556	19	87.9	12.0	.1
1934 1/	9,669	8,440	1,216	13	87.3	12.6	.1

Merchant production by grades

Table 6 shows the distribution of merchant production of pig iron as between steel making and casting grades. It will be noted that approximately 70 per cent of the merchant pig iron output consists of the casting grades, - i.e., foundry, malleable, and forge iron, - and approximately 30 per cent consists of the steel making grades, - i.e., basic Bessemer and low-phosphorus.

(*) Compiled from statistical reports of the American Iron and Steel Institute.
(1/) First six months.

Table 6. - Merchant production of pig iron by grades - 1920-1934* 1/

(In thousands of gross tons)

Year	Total merchant production	Steel making grades	Casting grades	All other	Per cent of total: Steel making grades	Per cent of total: Casting grades	Per cent of total: All other
1920	10,243	3,245	6,962	36	31.7	68.0	0.3
1921	3,570	975	2,592	3	27.3	72.6	.1
1922	6,233	1,687	4,534	11	27.1	72.7	.2
1923	10,106	2,877	7,218	11	28.5	71.4	.1
1924	8,058	2,226	5,828	4	27.6	72.3	.1
1925	8,587	2,510	6,069	8	29.2	70.7	.1
1926	9,288	2,638	6,621	29	28.4	71.3	.3
1927	8,978	2,425	6,545	8	27.0	72.9	.1
1928	7,724	2,158	5,560	6	27.9	72.0	.1
1929	9,014	2,737	6,274	3	30.4	69.6	2/
1930	6,567	1,921	4,604	42	29.3	70.1	.6
1931	4,000	1,160	2,823	17	29.0	70.6	.4
1932	1,714	526	1,173	15	30.7	68.4	.9
1933	2,068	645	1,417	6	31.2	68.5	.3
1934 1/	1,484	411	1,069	4	27.7	72.0	.3

Importance of merchant production

Table 7 shows the importance of domestic merchant pig iron output in relation to the total domestic production of pig iron, and the importance of the domestic output of the steel making and casting grades in relation to the total domestic output of each of those grades. It will be noted that the merchant furnaces have been responsible for approximately 90 per cent of the domestic output of casting iron for more than a decade. In contrast, less than 10 per cent of the steel making grades is produced in merchant furnaces and this proportion reached its lowest point of approximately 5 per cent in 1933 and 1934.

(*) Compiled from statistical reports of the American Iron and Steel Institute, page 6.
(1/) First six months.
(2/) Less than 0.1 per cent.

Table 7. - Ratio of merchant production to total output of pig iron, by grades*

(Per cent)

Year	All grades	Steel making grades	Casting grades	All other
1920	28.3	11.3	94.7	39.1
1921	21.8	7.3	85.6	12.5
1922	23.2	7.8	88.8	17.5
1923	25.4	9.1	88.6	10.9
1924	26.1	9.2	87.6	7.7
1925	23.8	8.6	87.0	15.7
1926	24.1	8.5	89.4	35.4
1927	25.0	8.5	89.1	17.0
1928	20.7	6.9	89.4	14.3
1929	21.6	7.9	90.6	7.3
1930	21.2	7.5	87.8	61.8
1931	22.3	7.8	90.6	53.1
1932	20.0	7.2	95.1	68.2
1933	15.9	5.6	91.1	31.6
1934	15.4	4.9	87.9	30.8

Importance of merchant production in area of import competition

The ratio of merchant production to total United States production of pig iron declined from 21 per cent in 1931 to 19 per cent in 1932, and to 15 per cent in 1933, but rose to 17 per cent in 1934. In the States in which the complainants are located, however, the ratio of merchant production to total production was approximately 26 per cent in 1931 and 1932; it declined to 23 per cent in 1933 and rose to 24 per cent in 1934. The proportion of the total merchant output produced in this area increased from 53 per cent in 1931 to 59 per cent in 1934.

Table 8 compares the course of total domestic production of pig iron and total merchant production with production in the area in which import competition is encountered.

(*) Computed from statistical reports of the Iron and Steel Institute.

Table 8. - Comparison of merchant production with total production of pig iron in the United States and in the producing area of import competition*, 1931-1934

Period	Domestic pig iron production		Production in States in which complainants are located 1/		Ratio of merchant to total		Ratio of merchant production in States in which complainants are located to total merchant production
	Total	Merchant	Total	Merchant	In United States	In States in which complainants are located	
	Thousands of gross tons				Per cent		
Years							
1931	18,234	3,768	7,784	2,003	20.7	25.8	53.3
1932	8,667	1,653	3,432	888	19.1	25.9	53.7
1933	13,229	1,995	5,492	1,255	15.1	22.4	61.8
1934	15,972	2,755	6,712	1,626	17.2	24.2	59.0
Six months periods							
1931							
First	11,096	2,186	4,805	1,094	19.7	22.8	50.1
Second	7,138	1,582	2,978	914	22.2	30.7	57.8
1932							
First	5,157	957	2,103	550	18.6	26.1	57.5
Second	3,510	696	1,329	338	19.8	25.4	48.6
1933							
First	4,445	548	1,546	300	12.3	19.4	54.7
Second	8,784	1,447	3,946	933	16.5	23.6	64.5
1934							
First	9,847	1,604	4,196	973	16.3	25.2	60.7
Second	6,125	1,151	2,516	653	18.8	26.2	56.7

(*) Compiled from reports published in Steel.

(1/) Does not include production in Massachusetts, Maryland, and Virginia; figures for these States could not be segregated from those for other States not along the North Atlantic seaboard. No blast furnaces in Massachusetts or Virginia have been in operation since the second quarter of 1931, however. Total Pennsylvania production is included, although not all of it competes with imports.

Exports of pig iron are small in comparison with either domestic production or imports. For more than a decade exports have not amounted to as much as 1 percent of the annual domestic production for sale except for the year 1928. Since 1928, exports have declined steadily in ratio to production for sale in the United States.

Table 9. - Course of exports of pig iron, 1922-1934

Year	Quantity	Value	Value per ton
	Gross tons		
1922	30,920	$756,842	$24.48
1923	32,318	862,443	26.69
1924	41,483	957,921	23.09
1925	32,674	724,565	22.18
1926	25,208	523,883	20.78
1927	50,993	1,028,425	20.17
1928	84,682	1,336,794	15.79
1929	46,357	830,225	17.91
1930	13,671	291,683	21.34
1931	6,719	150,658	22.42
1932	2,324	53,966	23.23
1933	2,750	63,985	23.27
1934	4,096	97,060	23.69

Imports

Table 10 shows the course of imports of pig iron by important countries during three pre-depression years and in 1932, 1933, and 1934. It will be noted that imports from the Netherlands amounted to 54 percent of the total quantity in 1934 as compared with 12 percent in 1925 and 16 percent in 1929. British India, throughout this entire period, has been an important source of imports. The unit values of imports from British India have been somewhat lower than those of other important sources.

The sharp decline in the total quantity imported in 1927 reflects the immediate effect of the change in duty resulting from the Presidential proclamation of that year.

Table 10. - Imports of pig iron into the United States by principal countries

	1925	1927	1929	1932	1933	1934 1/
Quantity (tons)2/						
United Kingdom	96,869	21,129	39,140	23,378	5,495	600
Canada	6,455	725	7,382	2,113	12,259	8,984
British India	184,325	66,627	69,243	28,820	68,056	36,013
Netherlands	54,904	29,380	24,189	74,372	68,341	61,939
All other countries	98,872	14,707	7,809	1,947	4,465	6,748
Total	441,425	132,568	147,763	130,630	158,596	114,284
Value						
United Kingdom	$1,926,275	$406,003	$676,247	$231,680	$64,151	$10,451
Canada	142,419	13,166	150,283	38,339	226,309	177,028
British India	3,020,816	1,002,070	956,685	254,093	389,705	333,142
Netherlands	1,033,686	535,454	435,782	748,564	701,546	833,747
All other countries	1,828,087	297,662	179,486	28,949	57,495	104,335
Total	7,951,283	2,254,355	2,398,488	1,301,625	1,439,206	1,457,703
Unit value						
United Kingdom	$19.89	$19.22	$17.28	$9.91	$11.67	$17.42
Canada	22.06	18.16	20.36	18.14	18.45	19.71
British India	16.39	15.04	13.82	8.82	5.73	9.25
Netherlands	18.83	18.23	18.02	10.07	10.27	13.44
All other countries	18.49	20.24	22.98	14.87	12.88	15.46
Average	18.01	17.01	16.23	9.96	9.07	12.75
Percent of total quantity						
United Kingdom	21.9	15.9	26.5	17.9	3.5	0.5
Canada	1.5	.5	5.0	1.6	7.7	7.9
British India	41.8	50.3	46.8	22.1	42.9	31.5
Netherlands	12.4	22.2	16.4	56.9	43.1	54.2
All other countries	22.4	11.1	5.3	1.5	2.8	5.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

1/ Imports for consumption.

2/ Tons of 2,240 pounds.

By customs districts

Imports of pig iron are entered almost entirely along the Atlantic seaboard north of Norfolk, Va., and are centered in the customs district of Philadelphia which accounted for 58.3 percent of the total importation in 1933. An examination of imports by countries through the various customs districts during the first six months of 1933, the most recent period for which this information is available, indicates that imports through Buffalo are entirely of Canadian origin and were entered at unit values equal to or higher than the domestic price of merchant pig iron produced in that area. Table 11 shows the imports of pig iron in 1933 by customs districts.

Table 11. - General imports of pig iron in 1933, by custom districts

District	Quantity	Percent of total
	Gross tons	
Total	158,596	100.0
Philadelphia	92,366	58.3
Massachusetts	10,355	6.5
Connecticut	10,049	6.3
Maryland	8,998	5.7
New York	7,732	4.9
Rhode Island	10,847	6.8
Buffalo	2,749	1.7
All other	15,500	9.8

Ratio of Imports to Production

Table 12 shows the course of the ratio of imports to domestic production of pig iron since 1922, with respect to both total production and production for sale.

Table 12. - Comparison of imports of pig iron with total production, and production for sale, 1923 - 1934

Year	Production		Imports	Ratio of imports to production	
	Total	For sale only		Total	For sale only
	Thousands of long tons			Percent	
1923	39,721	10,106	368	0.93	3.64
1924	30,875	8,058	209	.68	2.59
1925	36,116	8,587	441	1.22	5.14
1926	38,698	9,288	446	1.15	4.80
1927	35,853	8,978	133	.37	1.48
1928	37,402	7,724	141	.38	1.82
1929	41,757	9,014	148	.35	1.64
1930	31,021	6,567	137	.44	2.09
1931	17,958	4,000	84	.47	2.11
1932	8,550	1,714	131	1.53	7.62
1933	13,001	2,068	159	1.22	7.69
1934 1/	9,669	1,484	65	.67	4.38

1/ First six months.

The production figures in Table 12 were obtained from the annual reports of the American Iron and Steel Institute. Table 13 shows in greater detail the course of the ratio of imports to total production, to total merchant production, and to merchant production in the area in which the complainants operate. These data include some ferromanganese and spiegeleisen for which separate data are not available.

It will be noted that the ratio of imports to total production exceeded 1 percent only in the years 1925 and 1926, immediately prior to the increase in the tariff by Presidential proclamation, in 1932,

the low point of the depression, and in 1933, the first year of the recovery program.

The ratio of imports to production for sale reached its first peak of 5.14 percent in 1925, after which it followed a downward trend to 1.04 percent in 1929. It rose to approximately 2 percent in 1930 and 1931. A sharp increase in shipments from the Netherlands after 1931, arising from the special circumstances of sterling depreciation and the British tariff, paralled by low domestic production, resulted in an increase in the ratio of imports to domestic merchant production to 7.6 percent in 1932 and 1933, despite an increase of 21 percent in domestic merchant output in the latter year.

In 1934 domestic merchant production increased while imports declined and the ratio dropped to about 4 percent, as shown in Table 13. In fact, the ratio by quarters during 1934 was lower than in corresponding periods of 1933 or 1932. Roughly speaking, the same trend appears from a comparison of imports with domestic merchant production in the area of import competition.

Table 13. - Ratio of imports to domestic production of pig iron

(Quantities in thousands of gross tons)

Period	Domestic production 1/			Imports	Ratio of imports to production		
	Total	Merchant	Merchant production in area of import competition 2/		Total	Merchant	Merchant production in area of import competition
					Percent		
Year							
1931	13,234	3,768	3/ 2,008	84	0.46	2.23	4.18
1932	8,667	1,653	888	131	1.51	7.92	14.75
1933	13,229	1,995	1,233	159	1.20	7.97	12.90
1934	15,972	2,755	1,626	114	.71	4.14	7.01
Six-months periods							
1931 - First	11,096	2,186	3/ 1,094	56	.50	2.56	5.12
Second	7,138	1,582	914	28	.39	1.77	3.06
1932 - First	5,157	957	550	75	1.45	7.84	13.64
Second	3,510	696	338	56	1.59	8.45	16.57
1933 - First	4,445	548	300	63	1.42	11.50	21.00
Second	8,784	1,447	933	96	1.09	6.63	10.29
1934 - First	9,847	1,604	973	65	.66	4.05	6.68
Second	6,125	1,151	653	49	.80	4.26	7.50
Quarters							
1931 - First	5,452	1,050	2/ 474	22	.40	2.09	4.64
Second	5,644	1,136	2/ 620	34	.60	2.99	5.48
Third	3,882	928	521	14	.36	1.51	2.69
Fourth	3,256	654	393	14	.43	2.14	3.56
1932 - First	2,891	586	348	34	1.18	5.80	9.77
Second	2,266	371	202	41	1.81	11.05	20.30
Third	1,692	324	119	15	.89	4.63	12.60
Fourth	1,818	372	219	41	2.26	11.02	18.72
1933 - First	1,650	240	123	24	1.45	10.00	19.51
Second	2,795	308	177	39	1.39	12.66	22.03
Third	5,138	721	468	57	1.11	7.91	12.18
Fourth	3,646	726	465	39	1.07	5.37	8.39
1934 - First	4,120	671	426	43	1.04	6.41	10.09
Second	5,727	933	547	22	.38	2.36	4.02
Third	3,188	632	361	33	1.03	5.25	9.14
Fourth	2,937	519	292	16	.54	3.08	5.48
1935 -January	1,476	143	75	2	.14	1.40	2.67

1/ Compiled from reports published in Steel.
2/ Production in Maryland not included because not separately available.
3/ Data for the first six months of 1931 do not include small production in Massachusetts and Virginia. No blast furnaces have operated in those States since that time.

Table 14 shows the course of the ratio of imports to the combined pig iron production of the producers who have submitted data in support of this complaint. It will be noted that this ratio was at its highest point in the second quarter of 1933 - the three-months period immediately preceding the promulgation of the code under which these producers operate. Since the code has been in effect, the trend of the ratio of imports to the combined output of these producers has been generally downward.

Table 14. - Ratio of imports to reported production of complainants

Period	Number of companies reporting	Reported production	Imports	Ratio of imports to reported production
		Gross tons		Percent
Years				
1929	9	1,700,540	147,763	8.69
1931	7	1,027,562	1/ 84,259	8.20
1932	5	408,292	130,528	31.97
1933	6	476,607	158,393	33.23
1934 2/	6	536,478	97,905	18.24
Quarters				
1932				
First	4	118,949	33,932	28.53
Second	2	96,799	41,169	42.53
Third	2	90,623	15,121	16.69
Fourth	3	101,921	40,306	39.55
1933				
First	2	49,628	24,140	48.64
Second	2	65,928	38,551	58.47
Third	6	159,272	56,572	35.52
Fourth	6	201,779	39,130	19.39
1934				
First	6	183,006	43,337	23.68
Second	5	181,491	21,947	12.09
Third	5	171,981	32,621	18.97

1/ Data from Tariff Commission; differs slightly from Department of Commerce data which report 84,269 gross tons.

2/ First nine months.

Effect of the National Recovery Program

Pertinent provisions of the code

The Code of Fair Competition of the Iron and Steel Industry, under which the complainant producers are operating, contains the following provisions which are pertinent to this complaint:

Labor provisions. - Article IV, Section 2, states that " *** except in the case of executives, those employed in supervisory capacities and in technical work and their respective staffs, and those employed in emergency work, in so far as practicable and so long as employees qualified for the work required shall be available in the respective localities where such work shall be required *** none of the members of the code shall cause or permit any employee to work at an average of more than 40 hours per week in any six-months period or to work more than 48 hours or more than 6 days in any one week or more than 8 hours in any one day."

Section 5 of the same Article, and Schedule D, provide minimum hourly wage rates for common laborers in 21 districts. These wages range from 35 to 40 cents per hour, with the exception of the Birmingham and Southern districts, where minimum wages of 27 and 25 cents, respectively, are provided. Section 5 further provides for an immediate increase of 15 per cent in wages of laborers receiving more than the specified minimum.

Basing point provisions. - Schedule E of the code provides that prices of all iron and steel products produced under the code shall be quoted f.o.b. designated basing points listed in Schedule F of the code.

The basing points which affect the marketing of pig iron are located by States as follows: Massachusetts, 1; New York, 2; Pennsylvania, 7; Maryland, 1; Alabama, 1; Tennessee, 1; Ohio, 5; Michigan, 1; Minnesota, 1; Illinois, 2; Utah, 1. In general, this represents little change from the pre-code policy of quoting prices f.o.b. blast furnaces.

Price provisions. - Article VII and Schedule E of the code provide that each member of the industry shall adhere to an open price policy by maintaining on file with the Code Authority, a list showing the base prices for all of its products, together with any discounts which may be allowed. These prices are not to be changed except by filing a new list, which shall be effective not less than ten days after the date of such filing

Quoted prices are to be delivered prices which must not be less than the sum of the published base price (f.o.b. basing point) and an amount equal to the all-rail published freight tariff charges from the basing point, to the place of delivery. If such place of delivery is at the basing point, the published tariff switching charges to such place of delivery must be added to the basing point price. If other all-rail delivery is made, freight charges may be adjusted accordingly with the prior consent of the Board of Directors.

Violation of the provisions of this pricing policy is chargeable with a fine of $10 per ton of the product sold in violation. The following proviso may operate as an exception to the price provision:

> "The Board of Directors by the affirmative vote of three-fourths of the whole Board may permit any member of the Code generally to sell or contract for the sale of any product produced by such member or members at a base price which shall be less than the then published base price of such member or members for such product at the respective basing points therefor of such members, or at a delivered price which shall be less than the delivered price otherwise chargeable under the provisions of this Section 4, if by such vote such Board shall determine that the making of such sale or contract of sale at such less base price or less delivered price is in the interest of the Industry or of any other branch of the industry and will not tend to defeat the policy of Title I of the National Industrial Recovery Act by making possible the using or employing of an unfair practice."

Employment

Data supplied by the nine complainants indicate that in 1929 approximately 2,000 workers were engaged in their blast furnace plants and that the normal work day during that year consisted of 12 hours. This cannot be considered as representing total employment at any one time, because the individual reports cover different periods. During 1933 and 1934, however, summarized data as supplied by the complainants may be considered as representing the total employment in their blast furnace plants. These data are shown in Table 15. It will be noted that in July, 1933, the month immediately following the passage of the National Industrial Recovery Act, the number of workers was almost double the employment in the preceding April; also that employment apparently rose to a peak of 1,300 workers in January, 1934, but has followed a downward trend since that time.

Table 15. - Employment and activity in the production of pig iron by the reporting complainants

Payroll period including 15th of -	Number of employees	Number of companies reporting some employment	Number of companies reporting no production during period
1929 (aggregate)	1/ 7,901	9	0
1932			
January	329	3	5
April	359	1	7
July	10	1	7
October	0	0	6
1933			
January	460	4	7
April	506	4	7
July	1,007	6	3
October	1,220	6	3
1934			
January	1,302	6	3
April	1,011	5	4
July	1,297	6	4
October	829	5	6

1/ This total is arrived at by combining reports of producers as of different periods; it should not be considered as representing total employment as of any one date.

Various data submitted by the complainants indicate that employment in the pig iron industry was greatly affected by a "spread the work" policy on the part of the producers; that is, individual employees worked only a few days during each payroll period, being replaced by other employees in order to enable the workers to realize some earnings. The data in hand are not sufficiently detailed, however, to measure the extent to which this policy was followed. They do indicate, however, that part-time employment during periods of operation has largely disappeared in the pig iron industry under the code.

Earnings of labor

Apparent earnings of labor have not risen to the level of 1929 as the result of compliance with the Iron and Steel Code. However, in that year the normal work day was 12 hours in length, whereas the maximum work day under the code is eight hours. Moreover, the work week in 1929 consisted of six, and in some cases, seven days, whereas at present the maximum work week, with specific exceptions, is 40 hours. This will explain the failure of average semi-monthly earnings of labor, as shown in Table 16, to be as high as the level of 1929.

The difference between the apparent weekly earnings in all reporting plants and those of northern plants exists by reason of the fact that wages are normally lower in the Southern States, a condition which was perpetuated by a differential in minimum wages provided in the code.

Table 16. - Course of semi-monthly earnings of labor employed by reporting complainant producers

Payroll period including 15th of -	Number of reporting producers	Average semi-monthly wages	
		All producers	Northern producers
1929 1/	9	$70.10	$72.74
1932 1/	5	42.95	47.93
1933			
January	4	27.80	32.89
April	4	30.70	34.88
July	6	38.94	41.95
October	6	36.19	38.04
1934			
January	6	37.27	39.38
April	5	39.18	42.54
July	6	41.13	43.82
October	5	44.47	48.07

1/ Cannot be considered as representing any one specific payroll period; available data relating to specific periods are not adequate for establishing any trend within the year.

Hourly wage rates

Data from which the course of hourly earnings of labor can be estimated with any degree of satisfaction have been supplied for the period 1929-1934 by only three northern producers. These data are summarized in Table 17. It will be noted that average wages paid by these three producers increased from 36.5 cents per hour in July, 1933, the month immediately preceding the adoption of the code, to 45.0 cents in October, 1933; and that the general tendency continued upward throughout 1934.

Table 17. - Course of indicated hourly wage rates

Payroll period including 15th of -	Number of reporting producers	Simple average wage rates	Average wage rates of producers who supplied data for the entire period
			Cents
1929 1/	4	41.8	44.9
1932 1/	3	38.2	38.2
1933			
January	3	36.5	36.5
April	3	35.8	35.8
July	3	36.5	36.5
October	3	45.0	45.0
1934			
January	4	43.5	45.7
April	2/ 3	42.5	45.1
July	4	46.4	49.6
October	2/ 3	56.1	65.6

1/ Cannot be considered as representing any one specific payroll period; available data relating to specific periods are not adequate for establishing any trend within the year.

2/ Blast furnaces belonging to two of those producers were banked.

Costs of production

Data have been supplied by only two producers, from which the change in the cost of producing foundry pig iron since the passage of the National Industrial Recovery Act can be estimated. One company supplied costs applicable to the last six months of 1931 as compared with the period from September 1, 1933, to January 31, 1934. Data submitted by this producer indicate that his total cost was only 5 per cent higher during the latter period than during 1931. This is largely due to the fact that raw material costs were slightly lower during the latter period. Data submitted by the other producer indicate that raw material costs were 14.7 per cent higher during June, July, and August, 1934, than the average of the first six months of 1933, and that total costs had increased by 17.4 per cent.

Both producers indicate an increase of approximately 42 per cent in labor costs over those in effect under pre-code conditions.

Raw materials costs. - Raw material for the manufacture of pig iron, the cost of which amounts to about 80 per cent of total cost of production, consists of iron ore, coke and crushed limestone. The following

table shows the amount of each of these materials required to produce one gross ton of pig iron.

Table 18. - Domestic consumption of principal raw materials per gross ton of pig iron, 1933

Raw material	Consumption per gross ton of pig iron 1/
	Gross tons
Iron ore	1.660
Mill cinder, scale, etc.	.217
Coke	.864
Limestone	.351
Total	3.092

1/ Computed from American Iron and Steel Institute, Annual Statistical Report, 1933.

Published reports in the leading periodicals of the iron and steel industry indicate that the price of Lake Superior ore delivered to lower Great Lake ports has not varied since March 23, 1929. Prices of iron ore in the Birmingham district are not available.

Imports of iron ore are entered chiefly into Maryland from sources controlled by a major steel producer. The unit values of entries through other customs districts have varied widely and irregularly since the beginning of 1933, apparently depending upon the analysis of the ore. This renders impossible the establishment of a trend of unit values of a specific grade of ore. Table 19 shows imports of iron ore in 1933 and 1934 by customs districts.

Table 19. - Imports of iron ore in 1933 and 1934 by customs districts

Period	Total imports	Maryland	Philadelphia	New York	Buffalo	All other
			Quantity - long tons			
1933						
July-September	376,322	372,994	746	40	-	2,542
October-December	343,527	292,880	49,337	66	-	1,244
1934						
January-March	232,296	146,469	6,100	70,702	1,549	7,476
April-June	517,870	427,707	6,800	75,669	6,864	830
July-September	426,798	368,191	806	22,400	35,287	114
			Value per ton			
1933						
July-September	$2.28	$2.22	$14.59	$33.22	-	$6.65
October-December	2.33	2.02	4.08	44.95	-	3.89
1934						
January-March	2.16	2.00	4.25	2.21	$3.39	3.10
April-June	2.27	2.17	2.94	2.40	5.55	4.38
July-September	2.55	2.30	11.70	2.04	5.30	9.74
			Per cent of total quantity			
1933						
July-September	100	99.1	0.2	Negligible	-	0.7
October-December	100	85.3	14.4	Do.	-	.3
1934						
January-March	100	63.1	2.6	30.4	0.7	3.2
April-June	100	82.6	1.3	14.6	1.3	.2
July-September	100	86.3	.2	5.2	8.3	Negligible

The price of furnace coke at the ovens in Connellsville, Pa., as reported in Iron Age, increased from $1.75 per net ton during the first five months of 1933 to $3.85 during the last nine months of 1934, as compared with an average of $2.75 in 1929. The increase affects five of the 12 complainant producers, inasmuch as they purchase this material. Of the seven complainant producers who own and operate their own coke ovens, five are either branches or subsidiaries of steel producers and are not entirely dependent upon the sale of pig iron as an outlet for their metallic product.

In 1933, the average consumption of coke per gross ton of pig iron produced in the United States was 0.864 gross ton, or approximately one net ton. Although the yield of by-product coke in that year was only 68.97 per cent of the coal consumed (62.3 per cent in the case of beehive coke), the complainants owning their own coke ovens are able to utilize gas which is produced in the coking process as fuel in the production of pig iron; and a number of these producers normally sell their

excess gas to municipalities, thus recovering a portion of their fuel costs. One producer of pig iron also manufactures coal-tar products, thus recovering a substantial portion of its cost in producing coke.

Data with respect to costs of limestone used in the production of pig iron are not available. Most iron and steel producers own their own limestone quarries, thus obviating the necessity for purchasing this material in an open market.

Prices

During the first three months of 1933, the Iron Age composite pig iron price stood at $13.56 per gross ton, the lowest average since the World War. By June, 1933, this average had increased to $15.01 and by December of that year, to $16.90; there was a further rise to $17.90 per gross ton, the price which has prevailed since April, 1934. The increase of $4.34 per gross ton from the low point in 1933 represented an advance of 32 per cent. During the same period of time, the price of No. 2 foundry pig iron delivered from eastern Pennsylvania furnaces to Philadelphia, the principal center of consumption for merchant iron, rose from $13.26 to $20.26, or approximately 53 per cent; and the price of the same grade of iron delivered from Birmingham, Ala., to the docks of Philadelphia increased from $15 per ton to $19.88 per ton, or 32.5 per cent.

In 1934 the prices of No. 2 foundry iron quoted at points in eastern Pennsylvania (Bethlehem, Birdsboron and Swedeland), at Sparrows Point, Md., and at Everett, Mass., with one exception have been the highest basing point prices for this grade of the commodity in the United States. The same is true with respect to prices quoted for the malleable grade of pig iron, with the exception of the fact that Sparrows Point, Md. is not a basing point for this grade of product. Moreover, the delivered price of pig iron in Boston, Mass., from Everett, Mass., a suburb of Boston, where the plant of one of the complainants is located, is the same as the all-rail freight delivered price from Buffalo, N. Y.

Table 20 compares delivered prices of domestic No. 2 foundry iron at Philadelphia, the principal market in the United States, with the average landed cost of imports through that port for the years 1933 and 1934.

Table 20. - Comparison of approximate landed costs of imports with domestic prices delivered at Philadelphia

Period	Price of No. 2 foundry iron delivered from Eastern Pennsylvania	Price of No. 2 foundry iron delivered from Birmingham Ala	Approximate landed cost of imports from The Netherlands 1/	Approximate landed cost of imports from British India 1/
1933				
January	$13.26-$13.76	$15.-15.25	14.88	$10.77
February	13.26-13.76	15-15.25	14.98	9.59
March	13.26-13.76	15-15.25	15.01	9.63
April	14.26	15-15.25	14.29	9.29
May	15.26	17-17.25	13.97	10.52
June	16.26-16.76	17-17.25	14.58	10.13
July	16.26-16.76	17-17.25	15.56	12.00
August	17.26-17.76	18.12-18.37	14.08	11.14
September		18.88	15.00	12.29
October	18.26		16.42	11.72
November	18.26		19.73	12.73
December	19.26	18.88	17.10	13.39
1934				
January	19.26	18.88	14.49	13.41
February	19.26	18.88	20.70	14.52
March	19.26	18.88	17.61	15.53
April	19.26	18.88	17.15	20.06
May	20.26	19.88	18.77	15.71
June	20.26	19.88	19.00	15.47
July	20.26	19.88	19.73	14.96
August	20.26	19.88	20.69	15.76
September	20.26	19.88	20.16	16.22
October	20.26	19.88	22.10	15.26
November	20.26	19.88	20.55	16.45
December	20.26	19.88	---	16.14
1935				
January	20.26	19.88	---	18.58

1/ Unit value of imports plus duty at $1.125 per gross ton plus ocean freight at conference contract rates; does not include handling costs or importers' profits.

From data shown in Table 20, it may be noted that the landed cost of pig iron imported from the Netherlands, not including minor costs of shipping and handling or importers' profit, was not greatly different from domestic delivered prices during 1933 and early 1934. Since July, 1934, the landed cost of imports appears to have been somewhate higher than domestic delivered prices of No. 2 foundry iron. It may also be noted that the landed cost of imports from British India during 1933 and the early part of 1934 was roughly $5 to $7 per ton lower than the domestic delivered prices for No. 2 foundry iron. Since March, 1934, however, the landed cost of imports from British India has been only $3 to $5 per ton lower than domestic delivered prices.

The Currency Situation

The exchange value of the florin in terms of dollars rose 69 per cent from 40.27 cents in the first quarter of 1933 to 68.22 cents in the third quarter of 1934, whereas the average unit value of imports from the Netherlands rose 56 per cent during the same period. Table 21 shows a comparison of the extent of the rise in the exchange value of the florin and of the unit value of imports during 1933 and 1934.

Table 21. Comparison of trend of unit value of imports from the Netherlands with course of florin-dollar exchange

Quarters	Unit value of imports in dollars per gross ton	Florin-dollar exchange in cents per florin	Comparison with first quarter, 1933: Unit value of imports	Florin-dollar exchange	Comparison of trade: Florin-dollar exchange	Unit value of imports
1933						
First	$9.80	40.27	100.0	100.0	100.0	100.0
Second	9.21	45.97	94.0	114.1	100.0	82.4
Third	10.19	57.15	104.0	141.9	100.0	73.3
Fourth	11.57	62.46	118.1	155.1	100.0	76.1
1934						
First	12.27	65.65	125.2	163.0	100.0	76.8
Second	12.80	67.86	130.6	168.5	100.0	77.5
Third	15.31	68.22	156.2	169.4	100.0	92.2
Fourth	15.63	1/ 87.85	159.5	168.5	100.0	94.7

1/ Average for October and November used since no imports from the Netherlands were entered in December.

The exchange value of the rupee in terms of dollars rose 45 per cent from the first quarter to the fourth quarter of 1933, whereas the average unit value of pig iron imported from British India roseonly 18 per cent during the same period. However, during 1934 the average unit value of imports from British India ranged from 50 to 84 per cent higher than the first quarter of 1933, whereas the exchange value of the rupee in terms of dollars averaged somewhat less than 50 per cent above the level for that quarter. Table 22 shows a comparison of the unit value of imports from British India with the exchange value of the rupee during 1933 and 1934.

Table 22. - Comparison of trend of unit value of imports from British India with course of rupee-dollar exchange

Period (quarters)	Unit value of imports in dollars per gross ton	Rupee-dollar exchange: cents per rupee	Comparison with first quarter, 1933: Unit value of imports	Comparison with first quarter, 1933: Rupee-dollar exchange	Comparison of trends: Rupee-dollar exchange	Comparison of trends: Unit value of import
1933						
First	$5.47	25.68	100.0	100.0	100.0	100.0
Second	4.81	29.17	87.9	113.6	100.0	77.4
Third	6.02	34.60	110.0	134.7	100.0	81.7
Fourth	6.45	37.26	117.9	145.1	100.0	81.3
1934						
First	8.24	38.05	150.6	148.2	100.0	101.6
Second	10.07	38.33	184.1	149.3	100.0	123.3
Third	9.53	37.83	174.2	147.3	100.0	118.3
Fourth	9.86	37.37	180.3	145.1	100.0	124.2

APPENDIX A

The Industry in the Netherlands

Development of the Industry

The pig iron industry in the Netherlands is an outgrowth of the position of that country during the World War, at which time extreme difficulty was encountered in obtaining sufficient iron and steel for its needs. The promotion of this industry was begun in 1917, with the formation of a "committee for the establishment of blast furnaces, steel works, and rolling mills in the Netherlands." The original capitalization was 25 million florins, of which the government subscribed 7½ million. This was later increased to 35 million florins, of which the city of Amsterdam subscribed 5 million. Operations were begun early in January, 1924. At the present time there are three blast furnaces with total annual capacity of about 500,000 tons.

Sources of raw materials

The pig iron industry in the Netherlands obtains virtually its entire stock of raw materials from foreign sources. In 1933, imports of iron ore into that country amounted to 459,000 metric tons, of which Spain supplied 157,000, France 121,000, Sweden 117,000, and Algeria 49,000 tons. In addition, 379,000 metric tons of unroasted iron pyrites (sulphide ores) were imported chiefly from Spain, Italy, Portugal, Greece, and Belgium and Luxemburg. This grade of ore is not economical in the production of pig iron alone, since the sulphur must be eliminated by roasting before the ore is smelted. The sulphuric acid thus obtainable is important, however, in the production of phosphoric acid of which the Netherlands is a substantial exporter.

Coal is obtained from Germany, the United Kingdom, Belgium-Luxemburg, Poland and Danzig, Soviet Russia, and France. Limestone, the flux, is obtained chiefly from the concessions in Belgium and Luxemburg.

The fact that the Netherlands imports its iron ore from various sources indicates the possibility of changing at minimum cost the grade of iron produced to accomodate changing demands.

Location of the industry

The blast furnaces of the Netherlands are situated at the water's edge in the city of Amsterdam. This location is stragetic because of its accessibility for both ocean shipping and inland water transportation, which make possible virtual, if not complete, elimination of overland freight costs. This constitutes a substantial economy in costs of production and of marketing the product.

Production and exports

The output of pig iron in the Netherlands in 1924, the first year of production, was 91,100 metric tons. By 1927 the output was over 200,000 metric tons; and from 1928 to 1933, annual production was more than 250,000 metric tons.

The pig iron industry of the Netherlands depends primarily upon exports for the disposal of its metallic product. Table 1 shows the ratio of total exports to the production of pig iron since 1925.

Table 1. - Production and exports of pig iron in the Netherlands, in metric tons

Year	Production 1/	Gross exports 2/	Ratio of exports to production
1926	142,500	114,721	80.5
1927	203,700	149,633	73.5
1928	258,200	215,774	83.6
1929	253,800	179,276	70.6
1930	272,700	209,727	76.9
1931	256,717	222,857	86.8
1932	236,426	212,237	89.8
1933	252,645	238,807	94.5

1/ American Iron and Steel Institute, Annual Statistical Report, 1933.
2/ Netherlands foreign trade returns.

Transshipment constitutes an important but indeterminate element in the exportation of pig iron from the Netherlands. In 1933, imports of pig iron into the Netherlands amounted to 9,204 metric tons, whereas exports during that year were 283,807 tons. Data from which the consumption of imported pig iron in the Netherlands can be estimated are not available. Since the average unit value of imports has been considerably higher than that of either gross exports or net exports, however, it appears reasonable to suppose that they have been entered either for purposes of transshipment, or to satisfy a demand for iron of special grades, or both. Inasmuch as the unit value of gross exports has exceeded that of net exports, however, the hypothesis of transshipment appears to be the most reasonable one. This hypothesis is strengthened by the fact that, since the industry is an importer of iron ore, it should be in a position to produce the grades of iron required in its domestic market.

Table 2 shows the quantity and unit value of exports, imports, and net exports of pig iron from the Netherlands since 1925.

Table 2, - Netherlands exports and imports of pig iron,(*)
1926-1934

Year	Gross exports	Imports	Net exports
		Quantity - metric tons	
1926	114,721	37,155	77,566
1927	149,633	31,727	117,906
1928	215,774	35,628	180,146
1929	179,276	30,506	148,770
1930	209,727	32,840	176,887
1931	222,857	16,228	206,629
1932	212,237	10,501	201,736
1933	238,807	9,204	229,603
1934 1/	183,312	8,748	174,564
		Value - florins per metric ton	
1926	40.44	52.88	34.45
1927	40.39	37.06	35.91
1928	40.88	54.24	38.24.
1929	41.54	55.03	38.78
1930	42.65	50.78	41.14
1931	34.68	46.17	33.77
1932	23.62	35.01	23.02
1933	21.47	43.07	20.61
1934 1/	21.37	33.61	20.76

(*) Netherlands foreign trade returns
1/ January to October.

Export markets

The principal market for Netherlands pig iron, in the collective sense, is Europe. The principal markets on that continent in recent years have been the customs union of Belgium and Luxemburg, and France, while important secondary markets have included Sweden, Switzerland, Italy, and a number of other European countries. The largest single market at the present time, however, is the United States.

The relative importance of the export markets for Netherlands pig iron underwent a drastic change during the period 1931-1933. For example, prior to the financial collapse in Europe in 1931, Germany had been receiving approximately 14 per cent of these exports; in 1931 Germany's share was 5.8 per cent and since that year that country has imported no Netherlands pig iron. With declines in other foreign markets, the exports of Netherlands pig iron to the United Kingdom rose from 28,000 metric tons in 1930 to 64,000 tons in 1931, or from 13 to over 28 per cent of the total exports. As a result of the depreciation of sterling and change from a duty of 10 per cent to one of 33-1/3 per cent, exports of pig iron to the United Kingdom declined to 22,000 metric tons in 1932, and to negligible quantities since that time.

Meanwhile, total exports of pig iron from the Netherlands were 210,000 metric tons in 1930, 225,000 in 1931, 212,000 in 1932, 239,000 in 1933, and 183,000 metric tons in the first ten months of 1934. This has been due in great measure to increased exports to the United States. In 1928 and 1929, less than 15 per cent of exports was consigned to this country; in 1932, 1933, and the first ten months of 1934, more than 30 per cent of the Netherlands exports of pig iron was shipped to the United States.

Table 5 shows the course of Netherlands exports of pig iron by important countries, the relative importance of these export markets, and the annual average unit values of exports to these countries in terms of Netherlands currency. With respect to unit values it will be noted that, although average values have declined greatly since 1930, they have at all times been closely grouped.

Table 3. - Netherlands exports of pig iron, by important countries, 1928-1934.*

Country	1928-1929 Average	1930	1931	1932	1933	1934 1/
	Quantity - metric tons					
United States	25,920	6,615	18,223	67,089	74,613	58,728
Belgium-Luxemburg	49,698	59,528	58,879	48,407	58,793	42,244
France	35,272	24,358	16,942	19,435	36,503	11,299
United Kingdom	21,052	27,810	63,934	22,421	600	2/
Germany	23,689	29,600	13,010	15	-	2/
Sweden	9,378	23,715	21,140	16,771	17,932	23,893
Italy	8,861	6,520	6,825	5,647	8,219	5,081
Switzerland	2,440	5,529	3,204	5,458	8,453	10,325
Denmark	10,688	14,209	3,867	2,779	4,930	7,716
Canada	1,275	950	254	588	-	2/
All other	9,252	10,893	21,579	23,627	28,764	24,031
Total	197,523	209,727	222,857	212,237	238,807	183,312
	Per cent of total					
United States	13.1	3.2	5.9	31.6	31.2	32.1
Belgium-Luxemburg	25.2	28.4	26.4	22.8	24.6	23.0
France	17.9	11.6	7.6	9.1	15.3	6.2
United Kingdom	10.6	13.3	28.7	10.6	.3	2/
Germany	12.0	14.1	5.8	Negligible	-	2/
Sweden	4.8	11.3	9.5	7.9	7.5	13.0
Italy	4.5	3.1	3.1	2.7	3.4	2.8
Switzerland	1.2	2.6	1.5	2.6	3.5	5.6
Denmark	5.3	6.8	1.7	1.3	2.1	4.2
Canada	.7	.4	.1	.3	-	2/
All other	4.7	5.2	9.7	11.1	12.1	13.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
	Value--florins per metric ton					
United States	40.98	45.70	32.48	24.44	21.77	21.18
Belgium-Luxemburg	40.56	41.33	32.79	22.43	21.52	21.00
France	40.59	43.77	32.59	22.59	20.70	21.42
United Kingdom	43.40	44.35	31.32	25.44	21.01	2/
Germany	41.41	43.72	36.07	57.73	-	2/
Sweden	40.91	41.47	33.19	21.59	19.59	19.63
Italy	40.17	40.90	33.61	22.82	21.41	20.27
Switzerland	43.21	43.14	33.51	24.53	22.12	27.41
Denmark	40.93	42.54	33.04	23.57	20.61	20.61
Canada	40.00	40.86	36.32	25.87	-	2/
All other	42.72	41.97	54.15	24.19	22.74	25.88
Average	41.18	42.65	34.68	23.62	21.47	21.32

*Netherlands foreign trade returns.

1/ January-October, inclusive.

2/ Exports, if any, were negligible, and are included in "All other."

Effect of the currency situation on costs of production

Adherence to the gold standard on the part of the Netherlands has contributed materially to the lowering of the cost of producing pig iron since 1931. This arises from the fact that raw materials are purchases from countries whose currencies have depreciated. Neither Spain nor Sweden, the principal sources of hematite (oxide) ore, nor the United Kingdom, an important source of coking coal, are on the gold standard; and Germany, the most important source of coal, is pursuing a policy of stimulating exports by means of exchange manipulation. As a result, from 1931 to 1933, the average unit value of the net imports of hematite ore declined from 10.37 to 6.30 florins per metric ton ($4.17 to $2.56, converted at par); iron pyrites (sulphide ore) from 11.29 to 9.00 florins ($4.54 to $3.62), and coal from 11.88 to 6.14 florins ($4.78 to $2.47). Although Belgium, the principal source of limestone, has remained on the gold standard, the unit value of this imported material declined from 2.87 florins in 1931 to 1.91 florins in 1933 ($1.15 to $0.77, converted at par). The effect of these price changes on the raw material cost of producing pig iron is estimated in Table 4. This estimate is based upon the United States consumption of iron ore, coal, and limestone par gross ton of pig iron in 1933, as indicated in reports of the American Iron and Steel Institute. It does not include prices of mill cinder, scale, etc., which are not available. The table indicates a decline of more than 40 per cent in the total cost of imported raw materials, however.

Table. - Effect of declines in import values on the raw material cost of producing pig iron in the Netherlands

Raw material	Estimated quantity required par metric ton 1/	Unit value of imports		Approximate raw material costs per ton 2/		Percent decline
		1931	1933	1931	1933	
	Metric tons	Florins				
Hematite ore	1.633	10.37	6.30	16.93	10.29	39.2
Coal	.850	11.88	6.14	10.10	5.22	48.3
Limestone	.345	2.87	1.91	.99	.66	33.3
Total	2.828			28.02	16.17	42.3

1/ U.S. quantities reported by American Iron and Steel Institute, converted to metric equivalents.
2/ Computed from Netherlands foreign trade returns.

Other factors affecting costs of production

The possibility of recovering sulphuric acid from the roasting of iron pyrites is noted above in the discussion of "Sources of raw materials." Although current data regarding costs of production in the Netherlands are not available, it may be reasonably supposed that some degree of flexibility in the allocation of costs of producing is possible in so far as pyrites is used. Coal, rather than coke, is imported into the Netherlands. This indicates that the pig iron producer operates its own coke ovens in conjunction with its blast furnaces; it further indicates the possibility of

recovering substantial costs of producing pig iron by producing coal-tar derivatives which are used in the chemical manufacturing industry. The Netherlands is a substantial exporter of chemicals, paints, varnishes, and fertilizers.

The Netherlands pig iron industry supplies the city of Amsterdam with fuel gas. Although that practice is not uncommon in the United States, wherever followed, it makes possible partial recovery of the fuel cost of producing pig iron.

The location of the Netherlands blast furnaces with respect to deep water is noted above in the discussion of "Location of the industry." The effectiveness of this location is in sharp contrast with the locations of the blast furnaces in the United States; in this country it is necessary to transport either coal or iron ore, or the finished product relatively long distances (usually overland), thus adding materially to domestic costs of producing or marketing iron and steel products.

Returns from exports

The 42 per cent decline in the purchase prices of raw materials described above was instrumental in enabling the Netherlands pig iron industry to reduce the unit value of exports by approximately 38 per cent between 1931 and 1933 without great adverse effect on its profits. This is especially true if, as is true of production costs in the United States, between 75 and 80 per cent of the cost of producing pig iron is in the cost of raw materials. Inasmuch as production was only approximately 4,000 metric tons less in 1933 than in 1931, it does not appear probable that fixed costs of production increased in substantial degree.

United States trade with the Netherlands

The United States normally enjoys substantial commodity trade with the Netherlands, the balance of which is "favorable." The commodity trade of the United States with the Netherlands from 1926 to 1933 is shown in Table 5. It may be noted that our "favorable" balance of trade has declined from $61 million in 1927 to $18 million in 1933, and that our exports declined by approximately $100 million during the same period.

Table 5. - United States trade with the Netherlands, 1926-1933*

(In thousands of dollars)

Year	Exports	Imports	Excess of exports
1926	$135,795	$101,855	$33,940
1927	148,220	87,242	60,978
1928	142,278	83,604	58,674
1929	128,295	83,853	44,442
1930	104,915	51,193	53,722
1931	65,590	34,952	30,638
1932	45,254	22,430	22,824
1933	48,659	30,949	17,710

* U. S. Department of Commerce, Foreign Commerce and Navigation of the United States.

Iron and steel products. - The increase in United States imports of pig iron from the Netherlands since 1932 has been an important phase of the search of that country for foreign markets for her output of pig iron after the British tariff of 33-1/3 per cent against that commodity became effective. In 1932 our imports of iron and steel products from the Netherlands, which consist chiefly of pig iron, increased from $400,000 to $973,000, while our exports to that country declined from $639,000 to $359,000, thus changing our balance of trade with respect to iron and steel products from a favorable one of $239,000 to an unfavorable one of $614,000. In 1933 our exports to the Netherlands of iron and steel products increased to $820,000, while our imports of this class of commodity declined to $832,000, thus producing an approximately even balance of trade in iron and steel commodities between the two countries. Table 6 shows a comparison between our exports to and imports from the Netherlands in iron and steel products, excluding machinery and similar highly advanced commodities, since 1925.

Table 6. - Balance of trade with the Netherlands in iron and steel manufactures*

(In thousands of dollars)

Year	Exports	Imports	Excess	
			Exports	Imports
1926	$972	$2,134	-	$1,162
1927	891	897	-	6
1928	1,004	1,068	-	64
1929	1,362	738	$624	-
1930	980	354	626	-
1931	639	400	239	-
1932	359	973	-	614
1933 1/	820	832	-	12

*U.S. Department of Commerce, Foreign Commerce and Navigation of the United States.

1/ Preliminary.

Importance of United States in Netherlands trade

The United States declined in importance as a market for Netherlands exports from 3.7 per cent of the total exports of that country in 1929 to 2.7 per cent in 1931, but rose to 3.6 per cent in 1932. Similarly, the United States declined in importance as a source of imports into the Netherlands from 9.9 per cent in 1929 to 6.7 per cent in 1932. Similar data for 1933 are not available at this time. Table 7 shows the course of the trade of the Netherlands with the United States from 1929 to 1932.

Table 7. - Importance of the United States to the Netherlands in commodity trade*

(In millions of dollars)

Year	Exports			Imports		
	Total	To United States	Ratio to total	Total	From United States	Ratio to total
			Per cent			Per cent
1929	$790	$29	3.7	$1,106	$109	9.9
1930	681	19	2.8	972	85	8.7
1931	519	14	2.7	760	59	7.8
1932	336	12	3.6	522	34	6.7
1933 1/						

*U.S. Department of Commerce, Foreign Commerce Year Book, 1933.

1/ Not available.

APPENDIX B

The Pig Iron Industry of British India

History and present capacity

The pig iron industry of British India, in its modern sense, may be considered as having developed since 1881, when the government took over the pioneer plant of what is now the Bengal Iron & Steel Co., and put it on an operating basis. This plant was acquired by the present organization in 1889, and operations continued until 1931.

The Tata Iron and Steel Co., Ltd., the largest producer of pig iron in British India, was organized in 1907, began building its plant in 1908, and began the production of pig iron in December, 1911. Two other producers, the Indian Iron & Steel Co., Ltd., and the Mysore Iron Works, began operations in 1923. The latter producer is a small government-owned plant which produces charcoal pig iron only.

The total pig iron capacity of British India in 1933 consisted of 13 blast furnaces with rated capacity of 1,750,000 gross tons per year. Three small furnaces of this number are more or less obsolete, however, and the capacity is not included in published estimates.

Location

The blast furnaces which produce about 99 per cent of the pig iron output of British India are located in the midst of coal and high grade iron ore deposits of sufficiently abundant reserves to satisfy the needs of the industry indefinitely. The producers are located at such short distances from active coal and iron mines and limestone quarries as to incur minimum costs of transporting raw materials to their blast furnaces. The industry has the further advantage of location within less than 200 miles from Calcutta, the principal port of exportation. Moreover, the same railroads which connect this "iron belt" with Calcutta connect it directly with one of the principal iron and steel markets of the country.

Grades of pig iron produced

Coke pig iron produced in British India ranges in grade from basic and low-phosphorus iron, with high manganese content, to the rough equivalent of No. 2 or 2X foundry iron which has a silicon content of approximately 2.25 per cent. An analysis of the various grades of Indian pig iron reported by the Bureau of Foreign and Domestic Commerce indicates that it is comparable in grade with most of the domestic product.

Production and exports

Prior to the beginning of operations in 1923 by the Indian Iron & Steel Co., pig iron output ranged from 300,000 to 350,000 gross tons per year. From 1923 to 1926 total annual output ranged from 600,000 to 900,000 tons. From 1927 to 1931 the annual output of Indian iron was

over one million tons, but in 1932 production was slightly below that level. More recent figures are not available.

Between 1922 and 1931 exports represented from 30 to 40 per cent of the output of Indian pig iron. Table 1 shows the British Indian production and exports of pig iron since 1920.

Table 1. Production and exports of pig iron in British India*

Year	Production	Exports	
		Quantity 1/	Ratio to production
	Thousands of gross tons		Per cent
1920	311		
1921	369	59	16.0
1922	340	118	34.7
1923	623	183	29.4
1924	673	341	39.1
1925	880	382	43.4
1926	902	309	34.3
1927	1,140	393	34.5
1928	1,052	449	42.7
1929	1,392	568	40.8
1930	1,175	439	37.4
1931	1,058	350	33.1
1932	914		

Japan is the chief foreign market for Indian pig iron, normally receiving more than 50 per cent of the total exports. The United States is the second market in importance. Table 2 shows the exports of pig iron from British India by important countries since 1920.

*U.S. Bureau of Foreign and Domestic Commerce, Trade Information Bulletin No. 816.

1/ Fiscal year, 1929-32, etc.

Table 2. Exports of pig iron from British India, 1921-1932*

(In thousands of gross tons)

Fiscal year	Total exports	Exports to -			
		Japan	United States	United Kingdom	All other
1921-22	59	58	-	-	1
1922-23	118	112	3	-	3
1923-24	183	144	24	3	12
1924-25	341	171	134	19	17
1925-26	382	168	156	20	38
1926-27	309	234	40	16	19
1927-28	393	271	65	21	36
1928-29	449	353	52	5	39
1929-30	568	349	86	71	62
1930-31	439	160	108	99	72
1931-32	350	188	51	69	42
		Ratio to total (per cent)			
1921-22	100	98.31	-	-	1.69
1922-23	100	94.92	2.54	-	2.54
1923-24	100	78.69	13.11	1.64	6.56
1924-25	100	30.15	39.30	5.57	4.98
1925-26	100	43.98	40.84	5.24	9.94
1926-27	100	75.73	12.94	5.18	6.15
1927-28	100	68.96	16.54	5.34	9.16
1928-29	100	78.62	11.58	1.11	8.69
1929-30	100	61.44	15.14	12.50	10.92
1930-31	100	36.45	24.60	22.55	16.40
1931-32	100	53.72	14.57	19.71	12.00

*U.S. Bureau of Foreign and Domestic Commerce, Trade Information Bulletin No. 816, 1933

Trade of the United States with British India

Total. Table 3 indicates that commodity imports into the United States from British India normally exceed commodity exports to that country. It will be noted that the commodity balance of trade declined from $95 million in 1928 to $8 million in 1932. Partly as a result of the continued decline in our exports to British India and partly because of increased imports from that country, the "unfavorable" balance of trade increased to $34 million in 1933. Imports in 1933 were smaller, however, than in 1931; on the other hand exports in 1933 were only slightly more than 50 per cent of the 1931 exports to British India. As a result the "unfavorable" balance of trade in 1933 was slightly greater than that of 1931.

Table 3. Trade with British India, 1926-1933*

(In thousand dollars)

Year	Exports	Imports	Excess of imports
1926	$50,013	$150,930	$100,917
1927	53,297	131,005	67,708
1928	53,694	148,932	95,238
1929	55,359	149,332	93,973
1930	45,195	104,148	58,953
1931	33,698	48,521	21,823
1932	24,915	33,204	8,289
1933	19,858	53,759	33,901

*U.S. Department of Commerce - Foreign Commerce and Navigation of the United States.

Iron and steel trade. In contrast with our "unfavorable" balance of total commodity trade with British India, the United States enjoys a decidedly "favorable" balance of trade in iron and steel. Table 4, which shows the trade between these two countries in iron and steel manufactures, shows a decline in this balance from $4 million in 1926 to 390,000 in 1933.

Table 4. Balance of trade with British India in iron and steel manufactures*

(Thousands of dollars)

Year	Exports	Imports	Excess of exports
1926	5,438	1,423	4,015
1927	4,685	1,011	3,674
1928	4,301	777	3,524
1929	3,986	958	3,028
1930	3,693	1,211	2,482
1931	1,906	697	1,209
1932	738	259	479
1933 1/	782	392	390

Importance of the United States in British Indian trade. The importance of the United States as a source of imports into British India increased from 7.3 per cent in 1929 to 10.3 per cent in 1931, but declined to 8.5 per cent in 1932. At the same time, our importance as a market for exports from British India declined from 12.0 per cent of total exports from that country in 1929 to 7.6 per cent in 1932. Data for 1933 are not available. Table 5 shows the course of the trade of British India with United States since 1928.

*U.S. Department of Commerce - Foreign Commerce and Navigation of the United States.
1/ Preliminary.

Table 5. Importance to British India of United States trade*

(Thousands of dollars

Year	Exports			Imports		
	Total	To United States	Ratio to total	Total	From United States	Ratio to total
			Per cent			Per cent
1929	$1,174	141	12.0	907	66	7.3
1930	919	90	9 8	674	55	8.2
1931	556	50	9.0	464	48	10.3
1932	355	27	7.6	352	30	8.5
1933 1/						

*U.S Department of Commerce - Foreign Commerce Yearbook - 1933
1/ Not available.

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SURVEY OF INFORMATION

ON

STANDARD NEWSPRINT PAPER

May, 1934.

Complainant's Status Under the National Industrial Recovery Act

This is a report on a complaint filed January 17, 1934, by the Code Authority of the Newsprint Industry with the Imports Division of the National Industrial Recovery Administration, pursuant to Section 3 (e) of Title I of the Recovery Act. The complainant Code Authority represents the entire newsprint industry in the United States, which is composed of twenty-five member companies operating principally in the states of Maine, New York, Oregon, Minnesota, Wisconsin and Washington, and involving an estimated aggregate capital investment of about 300 million dollars. Most of these companies manufacture newsprint paper only, including the wood pulp from which it is made; however a few, chiefly the larger concerns, also manufacture a wide variety of paper and paper products.

The newsprint industry is operating under the Code of Fair Competition for the Newsprint Industry, approved by the President on November 17, 1933. The Code Authority states that all of the newsprint producers in the United States have complied with the provisions of Title I of the National Industrial Recovery Act. They have supplied information as outlined in the prescribed Rules and Regulations Governing Complaints, and have agreed to furnish to the National Industrial Recovery Administration and/or the United States Tariff Commission, any further information which may be necessary in completing the action requested in their petition.

Subject of Complaint and Tariff Treatment

Description of commodity

Newsprint paper, designed for use in the printing of regularly published newspapers, is made principally from woodpulp and is composed of approximately 75 to 80 percent of the short fibre ground-wood pulp and 20 to 25 percent of the long fibre sulphite pulp. Woodpulp, in turn, is made chiefly from spruce timber and to some extent from hemlock and fir. Experiments in recent years have resulted in the development of methods by which other species of timber, notably yellow pine, may in the future be converted into pulp suitable for newsprint.

Tariff treatment

Standard newsprint paper is imported into the United States free of duty under Paragraph 1772 of the Tariff Act of 1930, and was also imported free of duty under the Tariff Act of 1922.

Printing paper valued not above 2½ cents per pound was free of duty in the Act of 1913; that valued at not above 5 cents per pound remained free in the Revenue Act of September 8, 1916; and that not above 8 cents per pound in the Act of April 23, 1920.

The Newsprint Industry in the United States

Employment, payroll, and working hours

As shown in Table 1, employment and the average annual earnings per worker in the newsprint industry declined 27 and 28 percent respectively from 1928 to June, 1933, while total payroll declined 47 percent.

Table 1. Number of employees and payroll

Year	Number of employees	payroll	
		Total	Average per worker
		Thousands	
1928	8,960	$13,500	$1,510
1930	8,340	12,750	1,530
1932	6,790	7,850	1,155
1933 (June)	6,560	7,150 1/	1,090 1/
Percentage decline 1928 - 1933	27%	47%	28%

1/ On annual basis

A large proportion of the employees in newsprint mills work on a tour system, i.e., three tours of 8 hours each for continuous operation. Prior to the adoption of the code some of the employees not directly connected with the paper machines worked as much as 10 hours per day; however, most of them were on an 8 hour day basis. In recent years also most newsprint mills have operated only about 80 percent full time - from 38 to 39 hours out of a maximum 48 hour week - and some of them have operated even a smaller percent of full time.

The Code for the Newsprint Industry provided for a 40-hour week, averaged over a 13-week period, with a limitation on day workers of 48 hours in a single week, with time and one-third for hours worked in excess of 8 in a single day. Provision is also made for additional hours for tour workers who desire to be free to exchange shifts to meet situations such as the changing of wires and washing and cleaning of machines after a run. Such work is too small in amount and to irregular to justify the employment of an additional shift.

Employees not engaged directly in production, of whom there are only a few in each plant, are on a 42-hour basis averaged over a 4-week period. Watchmen may work 56 hours per week and office employees 40 hours per week averaged over a year, but not more than an average of 48 hours per week in any quarter. In emergency cases restrictions are removed for employees engaged in repair and maintenance work.

A comparison of the provisions of the code regarding working hours with the actual conditions of employment which prevailed prior to the adoption of the code indicates that the code probably has had little effect upon employment in the newsprint industry.

Number and capacity of mills

The number of companies producing newsprint paper in the United States declined from 39 in 1929 to about 27 in 1933, and the number of mills declined from about 60 to about 40.

From Table 2 it appears that, while there were 40 less machines in operation in 1932 than in 1927, the rated capacity in the industry remained practically stationary, indicating the installation of new machines or the modernization of old ones. However, the Newsprint Association states that whereas 354,000 tons of annual capacity have been withdrawn by nine companies since 1929, only 113,000 tons of annual capacity were added by two companies.

Table 2. Number of machines and rated capacity

Year	Number of machines	Capacity in short tons	
		Per day of 24 hours	Per year of 310 days
			Thousands
1925	146	5,721	1,774
1927	156	6,349	1,968
1928	141	6,101	1,891
1929	127	5,468	1,695
1930	121	5,523	1,712
1931	105	5,279	1,636
1932	116	5,630	1,745

Principal producers in the United States

Over 50 percent of the productive capacity of the newsprint industry in the United States is controlled by three companies. The largest of these companies is the International Paper Company, of New York, which, in addition to its holdings in Canada, operates ten mills in the United States with a combined rated daily capacity of 1,360 tons, or approximately 23 percent of the United States capacity in 1932. The second largest producing company is the Great Northern Paper Company, of Millinocket, Maine, which owns and operates three mills with a combined rated daily capacity of 1,010 tons,, or approximately 17 percent of the United States daily capacity in 1932. The third largest company is the Crown Zellerbach Corporation, of San Francisco, California, a holding company which owns or controls three mills in Oregon and Washington, with a combined rated daily capacity of 840 tons, or approximately 14 percent of the domestic newsprint capacity.

Relative consumption of domestic and imported woodpulp

Since woodpulp is used in the manufacture of products other than newsprint, it is impossible to determine exactly to what extent the domestic industry depends upon foreign sources of supply. Table 3 shows the proportion of total United States consumption of woodpulp of all types, of sulphite, and of mechanically ground pulp, which is supplied by imports.

It will be noted that the proportion of woodpulp consumption of all kinds supplied by imports increased sharply from 15 to 28 percent from 1919 to 1926; it remained practically stationary at about 28 percent from 1926 to 1932; and increased to 32 percent in 1933.

Table 3. Proportion of United States woodpulp consumption supplied by imports

(Thousands of short tons)

Period	Apparent consumption	Production	Imports	Exports	Ratio of imports to apparent consumption
					Percent
		All kinds			
1909	2,791	2,496	307 1/	12 1/	11.0
1919	4,114	5,518	636	40	15.5
1926	6,094	4,395	1,734	34	28.4
1929	6,695	4,863	1,886	54	28.2
1930	6,414	4,630	1,832	48	28.6
1931	5,952	4,409	1,596	53	26.8
1932	5,194	3,760	1,482	48	28.5
1933	6,002	4,160	1,921	79	32.0
			Sulphite		
1909	....	1,018	2/	2/	....
1919	....	1,420	283	2/	....
1926	2,570	1,558	1,035	23	40.3
1929	2,798	1,682	1,160	44	41.5
1930	2,639	1,567	1,107	35	41.9
1931	2,330	1,417	963	50	41.3
1932	2,017	1,146	917	46	45.5
1933	2,452	1,360	1,169	77	47.7
			Mechanically ground		
1909	1,309	1,179	130 1/	3/	9.9
1919	1,721	1,519	202	3/	11.7
1926	2,068	1,764	304	3/	14.7
1929	1,910	1,637	273	3/	14.3
1930	1,859	1,560	299	3/	16.1
1931	1,659	1,449	210	3/	12.6
1932	1,391	1,203	188	3/	13.5
1933	1,410	1,200	210	3/	14.9

1/ Fiscal years.
2/ Not Available.
3/ Negligible.

Of the total consumption of woodpulp in the United States 40 percent is sulphite, and, as shown in the preceding table, over 40 percent of this is imported from abroad. The proportion imported increased from about 41 percent in the years 1929 to 1931 to 45.5 percent in 1932 and to 47.7 percent in 1933. The annual consumption of mechanically ground pulp in recent years has amounted to between 25 and 30 percent of total woodpulp consumption, and as shown in the above table, somewhat less than 15 percent of this, on the average, is imported from abroad.

The Newsprint Industry in Canada

Number and capacity of mills

The Canadian newsprint industry consists of about 30 companies operating about 40 mills which are equiped with about 150 Fourdrinier machines. The daily capacity of the Canadian industry increased from 2,630 tons in 1920 to 12,940 tons in 1932, an increase of 492 percent.

Principal Canadian producers

Approximately 50 percent of the total capacity of the Canadian newsprint industry is controlled by three companies. The largest of these, the Abitibi Power and Paper Company, operates eight mills with a combined daily capacity of about 2,000 tons. The second largest company, the International Paper Company, controls three mills in Canada with a combined daily capacity of 1,970 tons. The third largest company is the Consolidated Paper Corporation, which controls five mills, having a daily capacity of 1,950 tons.

United States investment in and control of the Canadian Newsprint Industry

Although no estimate is available as to the amount of United States capital invested in the Canadian newsprint industry alone, the Department of Commerce has estimated that the investment of the United States capital in the Canadian paper and pulp industry as a whole amounted, in 1930, to over 400 million dollars, which is more than 50 percent of the 794 million dollar capital investment in that industry.

Approximately 35 percent of the Canadian newsprint capacity is controlled either by United States corporations or by corporations operating both in the United States and Canada. In addition to controlling about 37 percent of the capacity of the newsprint industry in the United States, The Crown Zellerbach Corporation and the International Paper Company operates four mills in Canada, having a daily capacity of 2,270 tons, or approximately 18 percent of the total capacity of the Canadian industry. Six other Canadian mills, which have a daily capacity of about 2,250 tons, or approximately 17 percent of the total Canadian newsprint capacity, are owned or controlled by United States corporations.

Consumption of Newsprint Paper in the United States

Proportion of world production consumed in the United States

From Table 4 it will be noted that prior to 1932 about 50 percent of the world production of newsprint was consumed in the United States; in that year the proportion dropped to 44 percent.

Table 4. United States share of world newsprint consumption

Year	World production	United States consumption	Percent of world production consumed in the United States
	(In thousand short tons)		
1929	7,308	3,794	52
1930	6,975	3,652	51
1931	6,622	3,214	49
1932	6,275	2,791	44

Growth of consumption by publishers

The rapid development of the newsprint paper manufacturing industry and the correspondingly rapid growth of the newspaper publishing industry have been interdependent. The rapidity of expansion in these two industries, following the first use of woodpulp in the manufacture of paper is indicated by the increase in the number and circulation of newspapers. In 1860 there were only 387 daily papers, with a total circulation of approximately 1,500,000 and about 3,000 weekly papers, with a circulation of about 7,500,000. In 1914 there were 2,500 daily and Sunday papers and about 14,000 weekly and semi-weekly newspapers in the United States. The daily papers had a circulation of about 30 million copies, the Sunday papers about 17 million and the weekly and semi-weekly papers about 24 million. In 1927 there were 2,265 daily newspapers with a gross circulation of 42 millions, 7,760 weekly newspapers with a circulation of about 56 million, and 511 Sunday newspapers with a circultion of 27,-700,000.

In addition to the increase in the number of papers and in the circulation per issue, it is important to note the growth in size from the small four page paper of the early days to the not uncommonly large sized daily paper of 50 to 60 pages. In fact, there are now many daily papers which run well over 100 pages.

Trend of consumption and stocks

The table below shows the trend of total consumption, consumption by publishers, and of stocks at mills, in the United States in recent years. It will be noted that total consumption declined 24 percent from the 1926-1929 average to 1933. Stocks at mills and total stocks declined 16 and 17 percent respectively. The significant fact is that consumption has declined to a greater extent than stocks, indicating a relative increase in the latter in 1933 as compared to former years.

Table 5. Consumption and stocks of newsprint in the United States

Statistical Period	Total consumption	Stocks at end of month	
		At mills	At mills, at publishers and in transit
	In thousand short tons:		
Annual average:			
1926 - 1929	3,582	312	3,084
1930	3,552	333	3,399
1931	3,214	399	2,223
1932	2,791	398	2,940
1933	2,729	255	2,567
Percentage decrease from 1926-1929 average to 1933	24%	18%	17%

Consumption by States

For 1928, the latest year for which data are available, the distribution of newsprint consumption among leading states was as follows: New York 22 per cent, Illinois 12 per cent, Pennsylvania 9 percent Massachusetts 6 percent, California 6 percent, Ohio 5 percent, Michigan 5 percent, Missouri 4 percent, Tennessee 3 per cent, Minnesota 2 per cent, Indiana 2 percent, Texas 2 per cent. The consumption in this group of 12 states amounted to over 75 per cent of the total consumption in the United States. Although the total consumption of newsprint paper in 1933 was less than that of 1926, it is probable that the percentage relations have not greatly changed.

Source of newsprint consumed in the United States

Approximately 35 percent of the newsprint consumed in the United States is supplied by the domestic industry; roughly 60 percent is supplied by imports from Canada, Newfoundland and Labrador; the remaining 5 percent is supplied chiefly by Sweden and Finland. Table 6 shows the sources from which the newsprint consumed in the United States is drawn, in quantity and in percentages for the years 1923 to 1933.

Table 6. Sources of newsprint consumed in the United States, 1923 - 1933

(Thousand short tons)

Year	United States consumption	United States production	Imports from Canada Newfoundland and Labrador	Imports from all other countries
1923	2,778	1,485	1,108	200
1925	2,955.	1,530	1,315	133
1927	3,461	1,486	1,865	122
1929	3,794.	1,392	2,327	96
1930	3,552.	1,282	2,145	135
1931	3,214.	1,157	1,915	151
1932	2,791.	1,007	1,647	145
1933	2,729.	946	1,640	154
	Percentage distribution			
1923	100	53.4	39.9	7.2
1925	100	51.8	44.5	4.5
1927	100	42.9	53.9	3.5
1929	100	36.7	61.3	2.5
1930	100	36.1	60.3	3.8
1931	100	36.0	59.6	4.7
1932	100	36.0	59.0	5.2
1933	100	34.7	60.0	5.6

World Production in Newsprint Paper

Changes in distribution of world production 1929 - 1932

Table 7 indicates the distribution of world production of newsprint paper among the principal producing countries in 1929 and 1932, and the significant changes which have occurred in the intervening period. For example, the decline of 14 per cent in total world production was due chiefly to the sharp decline in Canada, the United States, and Germany. Production in Sweden and Japan declined a relatively small amount. On the other hand, production showed a remarkable increase in England, Finland and France, and substantial increases occurred in Newfoundland and Norway.

Table 7. World production of newsprint paper by important countries, 1929 and 1932

(Quantity in thousands of short tons)

Country	1929		1932		
	Quantity	Percent of Total	Quantity	Percent of total	Percentage change
Total all countries	7,308	100.0	6,275	100.0	-14.1
Canada	2,729	37.4	1,915	30.5	-29.8
United States	1,392	19.0	1,007	16.1	-27.7
Great Britain	636	8.7	790	12.6	+24.2
Germany	623	8.5	450	7.2	-27.8
Japan	286	3.9	272	4.3	-4.9
Sweden	275	3.8	257	4.1	- 6.5
Newfoundland	256	3.5	272	4.3	+ 6.3
Finland	215	2.9	254	4.0	+18.1
France	210	2.9	275	4.4	+31.0
Norway	189	2.6	200	3.2	+ 5.8
Other	497	6.8	583	9.3	+17.3

It will be noted that the United States' share of world production declined 3 percent from 1929 to 1932 as compared with a decline of 7 percent in Canada's share; this decline was off-set, roughly, by a corresponding increase of production in European countries.

Course of Newsprint production in the United States

Table 8 shows the trend of newsprint production in the United States by quantity, value, and unit value, for certain years since 1899.

Table 8. United States production, 1899-1933

Year	Quantity (Thousands of short tons)	Value (Thousands)	Unit value per short ton
1899	569	$20,092	35.30
1904	913	35,906	39.34
1909	1,168	46,390	39.71
1914	1,313	52,943	40.31
1919	1,324	98,559	74.45
1921	1,237	114,315	92.38
1923	1,521	110,865	72.89
1925	1.563	106,083	67.86
1927	1,517	98,782	65.12
1928	1,415	---	---
1929	1,409	80,707	57.27
1930	1,226	---	---
1931	1,203	63,654	52.90
1932	1,047	---	---
1933	946	---	43.09 1/

1/ Average delivered cost Jan. - Sept.

From Table 8 it will be noted that the annual production of newsprint in the United States from 1904 to 1933 showed remarkably small variation. After a fairly sharp increase prior to 1909 the trend of production was gradually upward until 1925, the result being a total increase of 70 percent in the twenty year period. From 1925 to 1929 production declined about 10 per cent and then fell sharply - over 30 percent - from 1929 to 1933. In 1933 production was only 946,000 tons, just a little in excess of the production of 913,000 tons in 1904. In contrast to the trend of production, the value of newsprint rose sharply in the war years and remained at a high level until 1923. Since that time it has steadily declined to a level not greatly higher than that prevailing in the pre-war period.

Table 9 compares the Federal Reserve Board index of newsprint production in the United States with the combined index of manufacturing for the years 1923 to 1933 and by months for the year 1933. It will be noted that the annual index of newsprint production was consistently below the index of general manufacturing from 1927 to 1931; in 1932 it was above the general index, but again dropped considerably below it in 1933.

Table 9. Comparison of an index of newsprint production with the general manufacturing index.

Year	Combined index (manufactures)	Newsprint paper	Year 1933	Combined index (manufactures)	Newsprint paper
1923-1925	100	100	January	63	59
1926	108	112	February	63	59
1927	106	99	March	58	59
1928	112	94	April	68	62
1929	119	93	May	80	61
1930	95	86	June	93	65
1931	80	77	July	97	66
1932	63	68	August	89	68
1933 1/	76	63	September	84	60
			October	77	66
			November	70	70
			December	67	67

1/ Preliminary.

From the index of monthly production it appears that the comparatively low production in the newsprint industry in 1933 resulted from its failure to share in the general rise in production during the middle of the year. There was, however, a considerable improvement in newsprint production during the last six months of 1933 as compared with a sharp decline in the general manufacturing index, and in consequence the level of production in the last two months of the year was the same in the newsprint industry as in general manufacturing.

Newsprint Production by States

Table 10 shows the distribution of newsprint production by states. It will be noted that in 1929 Maine was the principal producing state, and that her share of the United States production increased from 30 percent in 1925 to about 40 percent in 1929. The share of New York the next largest producing state, declined about one-half from 1925 to 1929.

Newsprint production by states

States	1925		1929	
	Thousand tons	Percent of Total	Thousand tons	Percent of Total
Total	1,563	100.0	1,409	100.0
New York	483	30.9	235	16.7
Maine	470	30.1	561	39.8
Wisconsin	151	9.7	103	7.3
Minnesota	122	7.8	122	8.7
Washington	96	6.1	140	9.9
All other States	241	15.4	248	17.6

Comparison of production in the United States and Canada

Table II compares the trend of newsprint production in the United States and Canada for the past twenty years. It shows that in 1913 the domestic industry was responsible for approximately 80 per cent of the combined production of newsprint in Canada and the United States, but that since then the United States' share of the total has fallen steadly. In 1925 each country produced approximately 50 per cent of the total. By 1929 the United States' share had declined to 34 per cent and by 1933 to 32 per cent.

Table II. Production by United States and Canada with percentage of total produced by each country annually, 1913-1933

Year	Total	United States		Canada	
	thousands of short tons	Thousands of short tons	Percent	Thousands of short tons	Percent
1913	1,655	1,305	79	350	21
1914	1,728	1,313	76	415	24
1915	1,728	1,239	72	489	28
1916	1,923	1,315	68	608	32
1917	2,045	1,359	66	686	34
1918	1,995	1,260	63	735	37
1919	2,178	1,375	63	805	37
1920	2,387	1,512	63	875	37
1921	2,033	1,225	60	808	40
1922	2,530	1,448	57	1,082	43
1923	2,751	1,485	54	1,266	46
1924	2,834	1,481	52	1,353	48
1925	3,053	1,530	50	1,522	50
1926	3,566	1,684	47	1,882	53
1927	3,573	1,486	42	2,087	58
1928	3,799	1,418	37	2,381	63
1929	4,121	1,392	34	2,729	66
1930	3,786	1,282	34	2,504	66
1931	3,378	1,157	34	2,221	66
1932	2,915	1,007	35	1,908	65
1933	2,963	946	32	2,017	68

The rapid expansion of the newsprint industry in Canada during the past twenty years has been due to the fact that extensive tracts of timber and an abundance of advantageous water power sites have been available in Canada under Government lease at a comparatively low capital cost, making the initial investment incidental to the establishment of newsprint mills distinctly less in Canada than in the United States. On the other hand, the situation in the United States has been that substantially all sites affording sufficient supplies of timber and water power, and conveniently located for shipment of the finished newsprint to the consuming markets, have been available, if at all, only at a capital cost greater than those available in Canada. Furthermore, obsolescence of equipment, which has affected the industry on both sides of the boundary line, has been longer at work in the United States industry. However, many United States mills which have become obsolete during the last twenty years have been abandoned or have gone into the manufacture of other types of paper; other mills have been modernized by the installation of new machinery, and adequate reserves of timber have been provided or maintained.

Exports

Exports from principal producing countries

Table 12 shows the importance of total exports, and exports to the United States, from the principal newsprint producing countries for the year 1929, the most recent year for which complete data are available

Table 12.
Total Exports, and exports to the United States, in relation to production by principal producing countries, 1929

(Thousands of short time)

Country	Production	Exports to		Ratio to production of exports	
		All countries	United States	To all countries	To the United States
				Percent	Percent
United States	1,392	19		1.4	
Canada	2,729	2,515	2,195	92.2	80.4
Great Britain	636	108	---	17.0	---
Germany	623	254	9	40.8	1.4
Japan	286	58	1/	20.3	--
Sweden	275	218	51	79.3	18.5
Newfoundland	256	244	132	95.3	51.6
Finland	215	191	33	88.8	15.3
Norway	189	189	3	100.0	1.6

1/ 1900 lbs.

It will be noted from data in this table that newsprint is produced principally for export in Canada, Newfoundland, Sweden, Finland, and Norway. Moreover, the proportionately large amount exported to the United States is of more importance, and any restriction of the market would be more serious, in cases where the industry is principally an export industry than would be the case if the exports were merely incidental to a relatively large domestic production.

Exports from Canada to the United States

The proportion of the annual Canadian production of newsprint exported to the United States since 1921 is indicated in Table 13.

Table 13. Percentage of Canadian production exported to the United States, 1921 - 1933

(Thousand short tons)

Year	Production	Exports to the United States	Percentage exported to the United States
1921	803	657	81.3
1923	1,266	1,109	87.6
1925	1,522	1,295	85.1
1927	2,087	1,776	85.1
1929	2,729	2,195	80.4
1931	2,221	1,756	79.1
1933 1/	2,017	1,545	76.6

1/ Preliminary.

From the above table it will be noted that the increase in tonnage exports to the United States corresponded closely with the increase in production in Canada up to 1929. The decline in the percentage of exports to the United States since 1926 is due in part to the development of the newsprint industry in Newfoundland, which has exported approximately 50 percent of its production to the United States, amounting to over 5 percent of total imports into the United States in recent years.

Exports from the United States

Exports of newsprint from the United States are negligible in amount. However, even a small volume of exports is significant in the case of an industry which is operating at a relatively increasing disadvantage as is the newsprint industry of the United States.

Table 14 shows the relation of exports to domestic production of newsprint for the years 1929 to 1933.

Table 14. Ratio of United States exports to production, 1929- 1933

(Thousands of short tons)

Year	Production	Exports	Ratio of exports to production
			Percent
1929	1,392	19	1.4
1930	1,282	10	.8
1931	1,157	10	.8
1932	1,007	8	.8
1933	946	11	1.2

Imports into the United States

Course of total imports

Table 15 shows the quantity, value, and average unit value, of imports of newsprint paper into the United States in recent years. It will be noted that the quantity of imports declined 26 per cent, and the value of imports somewhat over 50 percent, from 1929 to 1933.

Table 15, Imports of standard newsprint paper, 1929 - March, 1934

(Quantity and value in thousands)

Statistical period	Quantity (short tons)	Value	Average unit value
1929	2,423	$144,493	$59.64
1930	2,280	131,793	57.82
1931	2,067	112,170	54.27
1932	1,792	84,721	47.27
1933	1,794	68,495	38.18
1931 Jan.-March.	492	27,845	56.60
Apr.-June	560	30,492	54.45
July-Sept	490	26,234	53.54
Oct.-Dec.	524	27,600	52.67
1932. Jan.-Mar.	446	21,623	48.48
April-June	487	23,577	48.41
July-Sept	421	20,185	47.94
Oct.-Dec.	438	19,335	44.14
1933 Jan.-Mar.	341	13,689	40.14
Apr.-June	439	17,036	38.81
July-Sept	492	18,809	38.23
Oct.-Dec.	521	18,960	36.39
Oct.	176	6,638	37.72
Nov.	177	6,360	35.93
Dec.	168	5,962	35.49
1934 Jan.-Mar.	463	15,737	33.99
Jan.	169	5,808	34.42
Feb.	125	4,207	33.77
Mar.	169	5,722	33.89

Imports by countries

Table 16 shows imports of newsprint paper into the United States from the principal countries and the share of each in the total for the years 1929 to 1933. The percentagesin the table indicate that the shares of Sweden, Finland and, to a lesser extent, Norway, although small, are increasing. Canada still greatly predominates but its proportion of the total

importation tends to decline. Through January 1934, Newfoundland and Labrador continued to supply from 5 to 8 percent; the significance of the decline in February and March, 1934, cannot now be determined.

Table 16. General imports, 1929 - Mar. 1934

(In quantity - tons of 2,000 pounds)

Period	Canada	Newfoundland and Labrador	Sweden	Finland	Germany	Norway
1929	2,194,587	131,915	50,719	32,607	9,250	3,498
1930	1,989,285	156,186	69,267	41,796	13,789	9,327
1931	1,756,056	159,781	66,687	47,992	21,910	14,444
1932	1,533,389	113,827	59,986	46,626	14,323	22,692
1933	1,545,293	94,944	68,061	56,576	12,058	16,791
Jan-Mar.	295,751	9,043	16,487	11,701	3,078	4,514
Apr-Jun	378,833	23,777	16,379	13,074	2,834	4,410
Jul-Sep	431,992	21,467	19,279	14,418	3,027	2,194
Oct-Dec	438,716	40,658	15,916	17,383	3,118	5,472
1934						
Jan.-Mar.	413,921	15,495	13,468	13,672	1,607	4,007
January	141,409	14,945	6,183	3,775	491	1,949
February	115,810	293	2,135	4,762	424	1,161
March	156,702	257	5,150	5,135	692	897
	In percent of total imports					
1929	90.6	5.4	2.1	1.3	.4	.1
1930	87.3	6.8	3.0	1.8	.6	.4
1931	85.0	7.7	3.2	2.3	1.1	.7
1932	85.6	6.4	3.3	2.6	.8	1.3
1933	86.2	5.3	3.8	3.2	.7	.9
Jan -Mar	86.8	2.6	4.7	3.5	.9	1.3
Apr.-Jun	86.2	5.5	3.6	3.6	.7	.9
Jul-Sep	87.8	4.4	3.9	2.9	.6	.4
Oct.-Dec	84.2	7.8	3.1	3.2	.6	1.0
1934						
Jan-Mar	89.0	3.3	2.9	3.0	.3	1.5
January	83.4	8.9	3.6	2.3	.3	1.2
February	92.8	.2	1.6	4.0	.3	.8
March	92.8	.2	3.1	3.0	.4	.5

Ratio of imports to domestic production

Table 17 shows the trend of imports of newsprint paper in relation to production in the United States since 1926. It indicates a decline in domestic production in each year since 1926; the total decline from 1926 to 1933 was 44 percent. Imports, on the other hand, increased approximately 30 percent from 1926 to 1929 but thereafter declined, and in 1932 and 1933 were about 3 percent less than imports in 1926. Nevertheless, with the exception of the year 1932, the ratio of imports to domestic production, based on annual figures, increased steadily throughout the period 1926 to 1933. This increase has been in progress for twenty years, but for a decade has been particularly rapid. It rose from 110 percent in 1926 to 175 percent in 1929, to 178 percent in 1932, and to 190 percent in 1933.

Table 17. Ratio of imports to domestic production

(Thousand short tons)

Statistical period	Domestic production	Imports	Ratio of imports to domestic production
			Percent
1926	1,684	1,850	110
1927	1,486	1,987	134
1928	1,418	2,157	152
1929	1,392	2,423	175
1930	1,282	2,280	178
1931	1,157	2,067	179
1932	1,007	1,792	178
1933	946	1,794	190
1932			
Jan.-Mar.	381	445	159
Apr.-June	264	487	184
July-Sept.	225	421	187
Oct.-Dec.	237	438	185
1933			
Jan.-Mar.	218	341	156
Apr.-June	238	439	184
July-Sept.	240	492	205
Oct.-Dec.	251	521	208
Aug.	88	151	172
Sept.	72	178	247
Oct.	82	176	215
Nov.	88	177	201
Dec.	81	168	207
1934			
Jan.-Mar.	242	463	191
Jan.	85	169	199
Feb.	72	125	174
Mar.	85	169	199

From the quarterly figures in Table 17 it appears that both imports and domestic production declined irregularly from the second quarter of 1932 through the first quarter of 1933 and increased in the last three quarters. The increase in imports in the last three quarters of 1933 was greater than the increase in domestic production, and, as a result, the trend of the ratio of imports to production, which had been interrupted in the preceding six months, resumed its upward movement. The ratio in the first quarter of 1934, although lower than in the preceding two quarters, was higher than in any other preceding quarter. The ratio for January, 1934, was still higher than in any quarter prior to the last two quarters of 1933, although less than those two. In February, 1934, imports declined more than production and the ratio dropped lower than that for any month since August, 1933, and lower than for any quarter since the low point reached in the first quarter of 1933. In general it will be noted that there was an irregular decline from September, 1933, to February, 1934, but an increase in March.

Effect of the National Industrial Recovery Act

Employment and payroll

Statistics of employment and payroll were submitted in support of the complaint by six individual companies. However, the data for some companies include pulp and paper mills other than newsprint. For this reason, and because the data cover only one month's operation under the code, it is difficult to draw any satisfactory conclusions as to the effect of the code on employment in the industry as a whole. Some companies appear to have increased employment and/ or payroll; others appear to have increased employment, but this increase was offset by a decrease in payroll; still others appear to have experienced a decline in both employment and payroll. If the changes in opposite directions as between companies, and as between the number employed and payroll within individual companies, are taken into account, it seems probable that the Newsprint Code had little effect on average labor cost for the industry.

Table 19, on page 33, shows the changes which occurred in labor cost per ton for eight newsprint companies. Three companies which experienced an increase in production from October to December of 1933 show a decline in the unit cost of labor ranging from 4 to 9 percent. Three companies whose output remained at the same level for the two months show increases in unit cost of labor ranging from 7 to 10½ percent. Two companies which experienced a decline in output show increase in unit cost of labor of 13 and 17 percent respectively. The comparison of the average unit cost of labor for the eight companies in the two months shows a net increase of 5 percent.

Costs of production

Table 18 gives in considerable detail the average costs of producing newsprint by twelve companies in Canada, and by twenty-four companies in the United States, for the first half of 1933. It also gives the average costs of producing newsprint in the United States in the third quarter of 1933 and an estimate of the increase in United States costs from May to December, 1933. These data were submitted in support of the complaint under Section 3 (e), and also at the National Recovery Administration hearing on the stabilization proposals of the Newsprint Code Authority on February 1, 1934. With respect to the greater total cost shown for Canada than for the United States, it should be noted that the twelve Canadian companies operated at only 55 percent capacity, whereas the twenty-four domestic companies operated at 70 percent capacity. Manifestly, the costs of the Canadian mills would have been somewhat lower if those mills had been operating at the same percentage of capacity as the domestic mills. Moreover, a higher or lower level of output in Canada or the United States would have the effect of altering the cost advantage prevailing between the producers of newsprint in the two countries.

Table 18. Weighted cost of newsprint paper per ton in Canada and the United States, 1933

(Excluding interest on indebtedness and return on investment)

Cost items	Canada (12 companies): First six months	United States (24 companies): First six months	United States (24 companies): Third quarter	United States (24 companies): Estimated increase December over May
Wood	$ 9.93	$10.09	$10.00	$1.70
Purchased pulp	.19	1.78	1.82	.48
Sulphur	.53	.40	.42	-
Alum, Size, Color, etc.	.35	.57	.67	.07
Limestone	.39	.10	.11	-
Pulpstones	.16	.11	.11	-
Fuel	2.37	2.52	2.24	.42
Power	4.11	3.43	3.51	-
Repair Materials	.91	.93	1.05	.15
Wires & Machine Clothing	1.01	1.18	1.17	.11
Supplies	.42	.27	.31	.05
Finishing & Shipping material	.53	.49	.49	.06
Labor	4.80	5.61	5.76	.85
Factory Burden & Misc.	1.33	1.76	1.57	.08
Insurance	.38	.28	.24	.01
Taxes	.79	.97	.95	.08
Depreciation	3.76	3.57	3.23 1/	-
Depletion	.92	.51	.51	-
General & Administrative Expense	2.35	1.97	1.70	.06
Selling Expense	1.04	.90	.87	.03
Cost f.o.b. mill	35.87	37.44	36.73	
Delivery to destination Points	7.66	5.84	5.98	
Total	43.53	43.28	42.71	4.15
Estimated increase December over May				9.5%
Percent of capacity operated	55.4%	70.8%	76.0%	

1/ This item was listed as $0.51 in the record of the hearings, and, if correct, would make a total delivered cost of $39.99.

The indicated decrease in costs in United States mills in the third quarter of 1933 compared with the first half of that year probably was due primarily to the increase in production from 70.8 per cent to 76 per cent of capacity. Only about one-fifth of the increase of $4.15 per ton was due to labor costs, whereas two-fifths of it was due to the increase in cost of pulp wood.

The relative increase of 9.5 per cent shown in Table 18 as occurring between May and December should be compared with the average increase in costs of 4.4 per cent shown in Table 19 as occurring between October, the last full month before the newsprint code became effective, and December, the first full month under the code. The increase from October to December is based on the average of the costs submitted individually by eight manufacturers in support of the complaint under Section 3 (e). Table 19 shows separately for each company the percentage of increase from October to December, in total costs, in general administrative expenses, and in labor costs. It also shows the percentage of capacity operated by each company in October and December. Taking all eight companies together the percentage of capacity operated was practically the same in the two months.

Table 19. Cost changes under N.R.A. Code

Company	Percentage of capacity operated		Percentage changes in costs October to December		
	October	December	Total	General & administrative	Labor
1	69	83	- 7.0	+ 12.6	- 8.9
2	67	92	- 3.6	- 28.0	- 4.2
3	100	92	+ 13.3	+ 21.0	+16.8
4	100	100	+ 3.7	+ 87.8	+ 8.7
5	93	87	+ 24.1	+ 185.1	+13.1
6	73	73	+ 3.2	+ 81.0	+10.5
7	68	78	+ 2.7	- 27.6	- 7.1
8	100	100	+ .4	+ 2.9	+ 7.1
Average			+ 4.4	+ 44.5	+ 5.0

The data in Table 19 indicate changes from October to December in total mill costs of production ranging from a decrease of 7 per cent to an increase of 24 per cent, or an average increase of 4.4 per cent. Changes in general and administrative expenses ranged from a decline of 28 per cent to an increase of 185 per cent or an average increase of 44.5 per cent. In sharp contrast it will be noted that the changes in labor costs shown in the last column of the table ranged from a decline of approximately 9 per cent to an increase of approximately 17 per cent, with an average increase of only 5 per cent.

Important Competitive Factors

Trend of newsprint prices in relation to the general price level

Table 20 compares the trend of prices of newsprint paper with the trend since 1926 in general wholesale commodity prices and in the prices of all paper and pulp products. It will be noted that up to and including 1930 the index of prices of newsprint paper compared favorably, but since 1930 has compared unfavorably, with the general price index for paper and pulp products. Moreover, from 1926 through the first three quarters of 1932 newsprint prices fell less than general wholesale price. Since the first quarter of 1933, however, newsprint has not shared the general rise in wholesale prices, and the index in December, 1933, was 55.7, based on average 1926 prices as 100, whereas the general price index on the same basis stood at 70.8 and the price index for the paper and pulp products industry as a whole stood at 82.5.

Table 20. Comparison of the trend of prices of newsprint paper with the trend in the general wholesale price index and the index of paper and pulp prices

Period	Wholesale commodity index	Paper and pulp index	Newsprint paper index
1926	100.0	100.0	100.0
1927	95.4	93.8	94.2
1928	96.7	91.4	94.2
1929	95.3	88.9	94.2
1930	86.4	86.1	94.2
1931	73.0	81.4	79.4
1932	64.8	75.5	70.2
1933	65.9	76.6	57.4
1932 - March	66.0	76.8	73.8
June	63.9	76.2	73.8
September	65.3	75.5	71.1
December	62.6	73.0	62.7
1933 - March	60.2	72.2	62.7
June	65.0	73.5	55.7
September	70.8	82.2	55.7
December	70.8	82.5	55.7

Comparison of average import values with domestic prices

Table 21 compares the annual average import values with domestic average delivered prices for the years 1929 to 1933. It should be noted that the average unit values of imports do not include transportation and importers' or brokers' profits.

Table 21. Comparison of average import values with domestic prices, 1929 - 1933

(Average value per ton of 2,000 pounds)

Year	Domestic price	Canada	Newfoundland and Labrador	Sweden	Finland	Germany	Norway
1929	$62.00	$60.23	$56.35	$50.79	$47.98	$49.02	$50.84
1930	62.00	58.55	56.65	49.57	46.20	48.78	47.62
1931	(62.00	55.12	53.24	46.55	43.73	43.05	49.68
	(57.00						
1932	(53.00	48.07	49.77	38.92	34.92	35.11	37.15
	(45.00						
1933	(45.00	39.31	38.05	27.92	25.33	27.67	28.60
	(40.00						

The average unit values of over 85 percent of the imports, which come from Canada and Newfoundland are only slightly below the domestic price, and the addition of a small amount to cover the cost of transportation would bring the net price to the consumer up to, or above, the level of the domestic price. However, a study of a breakdown of the average import values by ports of entry shows that imports from Newfoundland at times have been entered at average values which were very much below that of combined imports from Canada and Newfoundland.

The foreign value of imports from European countries in 1933 averaged about $12.50 less per ton than the average domestic delivered price at principal Atlantic and Gulf ports. This difference is accounted for chiefly by costs of packing, handling, and transportation. The North Atlantic Conference ocean freight on newsprint from North European to Atlantic ports was about $5.00 per short ton during 1933; in addition there were pre-terminal and post-terminal charges amounting to from $4.00 to $7.00 per short ton, depending upon the quantity involved. The total cost of handling and transportation therefore, would range from about $9.00 to $12.00 per ton. Adding these costs, and a reasonable margin of profit for importers, to the average import values shown in Table 21, gives a total landed cost somewhat less than delivered prices of domestic newsprint at the principal Atlantic ports. It is impossible to determine what price advantage, if any, would remain to the importer if differences in grade, quality, and methods of packaging for shipment, should be taken into consideration.

We have no reliable information as to variations in grade or quality of imported and domestic newsprint, and no information as to the exact amount of cost variations which are due to differences in the quantity shipped or in the methods of packaging. Furthermore, no statistics are available as to the amount of newsprint shipped, or the cost of transportation, by "tramp steamer." Consequently no strictly accurate price comparisons can be made.

Trend of import values and exchange rates

The present competitive position of the domestic newsprint industry, inscfar as it is affected by the currency situation, is substantially better than it was from September, 1931 to April, 1933. For example, the dollar value of the currencies of Canada, Sweden and Finland averaged about 12 percent, 30 percent, and 40 percent, respectively, below par for the year 1932. During 1923 the currencies of Canada and Sweden returned to par and that of Finland to within 10 percent of par.

Table 22 compares the trends of foreign exchange rates with the average unit value of imports from each of the countries which are the principal sources of newsprint.

It will be noted that the average annual import values for the countries shown in Table 22 declined to a considerably greater extent from 1930 to March, 1933 than did the exchange value of their currencies. Moreover, the average dollar value of imports has not risen, since March, 1933, to correspond with the appreciation of the currencies of these countries. In fact, although the exchange rates for Canada, Finland and Sweden rose 20, 45 and 49 percent respectively from March to December, 1933, the average value of imports from Canada and Finland declined a further 12.4 percent and 1.9 percent respectively, and the imports from Sweden rose only 1.6 percent. In short, it appears that the price competition has become somewhat more serious instead of less serious during the period of rising foreign exchange since March, 1933. This is due in part to the existence of excess stocks and the operation of relatively long term contracts.

Table 22. Comparison of trends of import values and exchange rates, 1929 - March, 1934

Statistical period	Exchange value in United States dollars			Unite value of imports per short ton from		
	Canada	Sweden	Finland	Canada	Sweden	Finland
	Par = $1.00	Par = $0.268	Par = $0.0252			
1929	$0.9925	$0.2678	$0.0252	$60.28	$50.79	$47.98
1930	.9984	.2685	.0252	58.55	49.57	46.20
1931	.9633	.2525	.0239	55.12	46.55	43.73
1932	.8809	.1847	.0155	48.07	38.92	34.92
1933	.9196	.2203	.0187	39.31	27.92	25.33
1933-Jan.	.8746	.1830	.0146	41.61	30.18	28.69
Feb.	.8351	.1827	.0149	40.74	29.86	26.61
Mar.	.8352	.1819	.0152	41.24	27.27	25.90
Apr.	.8472	.1881	.0158	39.65	26.49	27.03
May	.8759	.2024	.0175	40.44	27.36	25.26
June	.8989	.2128	.0182	39.69	27.66	24.26
July	.9447	.2398	.0205	39.80	26.48	24.76
Aug.	.9428	.2323	.0200	39.06	27.04	24.01
Sept.	.9647	.2505	.0207	39.54	28.69	24.46
Oct.	.9760	.2407	.0207	38.82	28.17	24.49
Nov.	1.0118	.2655	.0227	36.77	27.45	24.70
Dec.	1.0055	.2639	.0227	36.17	27.71	25.41
1934-Jan.	.9952	.2604	.0224	34.92	27.71	25.68
Feb.	.9917	.2596	.0223	34.28	28.84	25.54
Mar.	.9974	.2626	.0225	34.41	27.59	25.12
Percentage change:						
1930 to Mar. 1933	-16.4	-32.3	-39.7	-29.6	-45.0	-44.0
Mar. to Dec. 1933	+20.4	+45.1	+49.3	+12.4	+ 1.6	- 1.9
Mar. 1933 to Mar. 1934	+19.5	+44.4	+48.0	-16.6	+ 2.3	- 3.0

Proposed cooperation between the Code Authority of the Newsprint Industry in the United States and the Newsprint Export manufacturers Association of Canada

At the public hearing on February 1, 1934, before Deputy Administrator Pickard, the Code Authority of the Newsprint Industry made two general proposals for the stabilization of the newsprint industry. The first included a series of recommendations covering minimum prices, trade practices and trade customs; the second was a proposed agreement between the Association of Newsprint Manufacturers of the United States and the Export Manufacturers Association of Canada, providing and setting up machinery for the uniform administration and/or enforcement of the proposed trade practices in both the United States and Canada.

The principal feature of the proposed regulation of trade practices is a provision for the maintenance of a fixed minimum price for newsprint marketed in the United States. This is set out in the recommendations in the following terms: Except in the fulfillment of contracts signed before October 24, 1933, "no paper shall be sold or offered for sale directly or indirectly in any manner whatsoever by any member of the industry for delivery during the years 1933 and 1934 at less than a base price of $41.00 per ton, subject to the zone and other differentials;" these price differentials range from $1.50 below the base price to $6.00 above, depending upon the zone or territory as determined by the Newsprint Code.

It is further provided in the trade practices that the Code Authority, upon its own motion or upon application by any member of the industry or group of consumers, might adjust or modify such minimum prices to the extent that it should find such adjustment or modification justified by general changes in the cost of manufacturing or in the value of the dollar and by conditions in the newspaper publishing industry. Moreover, the agreement with the Export Manufacturers Association of Canada to comply with the requirements of the recommendations included agreement to comply with the adjustments and modifications which might be made from time to time by the Code Authority.

The proposed agreement further provided for a joint committee composed of four representatives of the American and four representatives of the Canadian association, selected in such manner and for such terms as the associations respectively should from time to time determine. It provided that the joint committee should have power to call joint meetings of the associations and to confer with members of the association, other manufacturers, importers, distributors, and consumers, with respect to stabilization of the industry and the elimination of unfair practices and destructive competitive prices, and to report the results of such conferences, with their recommendations to the associations.

Other principal provisions of the proposed agreement were: (1) methods of enforcing compliance with the trade practices, i.e., machinery for investigating, stipulation of legal remedies and penalties for, violation of the agreement, including application for restriction or regulation of imports under Section 3 (e) of the Act: (2) the interchange of statistics of plant capacity.

QUERRACHO (No. 7)

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SURVEY OF INFORMATION

ON

SOLID QUEBRACHO EXTRACT
December, 1 9 3 4

Complainant's Status under the National Industrial Recovery Act

This is a report on a complaint under Section 3 (e) of the National Industrial Recovery Act, filed by the Code Authority of the tanning extract industry, with respect to imports of solid quebracho extract. This industry is operating under a code of Fair Competition approved by the President on March 29, 1934. Prior to that time it operated under the President's Re-employment Agreement.

Subject of Complaint

Quebracho extract is an important tanning material, approximately 90 per cent of which is used in the tanning of heavy leathers, such as sole, belting, and harness leather, and 10 per cent in tanning lighter leathers, such as bag, strap, and upholstery leather. The extract is prepared in two commercial grades known in the trade as (1) "ordinary" or "hot water soluble" and (2) "clarified" or "cold water soluble." For industrial use, the clarified grade of solid merely requires dissolving to form a liquid, but the ordinary grade (which has comprised over 85 per cent of total imports during recent years), must also be treated with bisulphite of soda to free all of the tannin.

Quebracho extract is imported in solid form almost exclusively from Argentina and Paraguay. It has an available tannin content ranging from 62 to 65 per cent. For industrial use it must be dissolved to form a liquid of approximately 35 per cent tannin content.

The complaint is directed against solid quebracho extract which the complainant states "is being imported in increasingly large amounts at distressed prices." These imports are alleged to be competitive with chestnut extract produced from domestic chestnut wood and with liquid quebracho extract, which is produced domestically from imported quebracho logs.

The complainant further states that "the advent of the National Recovery Administration has raised the operating costs of the domestic producers, and they are now at still a greater disadvantage, facing further curtailment of their production and sales volume on account of the increasing imports of solid quebracho." They suggest that action be taken under Section 3 (e), to require (1) that importers "agree that no importation is to be sold at less than a certain price per net pound, ex-dock in bond, United States ports, basis 63 per cent tannin content", (2) that consumers and dissolvers be permitted to import under conditions specified above, but if the cost to them is less than the selling price established thereby, they be required to pay a tax equal to the difference, and (3) that no consumer be allowed to purchase for resale.

Tariff Treatment

Quebracho extract, whether solid or liquid, is dutiable at 15 per cent ad valorem under Paragraph 38 of the Tariff Act of 1930. It was dutiable at the same rate under Paragraph 39 of the Tariff Act of 1922, and was imported free of duty under Paragraph 624 of the Tariff Act of 1913.

Quebracho logs and wood are imported duty-free, along with other dyeing and tanning raw materials, under Paragraph 1670 of the Tariff Act of 1930. They were likewise on the free list in the Tariff Acts of 1922 and 1913.

The Domestic Industry

The Code of Fair Competition defines the tanning extract industry as "the manufacture, the liquefying and/or dissolving, for sale, of tanning extract from domestic wood and bark or from imported wood, bark, leaves, nuts and extracts." The code membership comprises 14 companies operating 25 plants and employing approximately 900 workmen. Representation on the code authority is provided for the following three branches of the industry: (1) Chestnut branch, consisting of nine companies, (2) quebracho branch, consisting of three companies, and (3) miscellaneous or specialty branch, consisting of two and possibly more manufacturers of extracts.

The chestnut branch

The chestnut branch of the industry consists of 19 plants situated in Tennessee, North Carolina, Virginia, and Alabama. Over 60 per cent of the total output of this branch of the industry in 1931-1933 was contributed by nine plants operated by two important manufacturers of paper and/or paper board, the extract being derived from chestnut-wood chips which are used later for pulp in the paper mills. A third company, operating three extract plants , maintains a contractual arrangement by which it furnishes its de-tanned chips to one of these paper manufacturers for pulp purposes. Considerable amounts were produced in three extract plants operated by two large tanners of sole leather who consumed practically all the output of the three plants. These companies work almost exclusively on chestnut.

The sole leather manufacturers, who operate three chestnut extract plants, are also important importers of solid quebracho extract and other tanning materials which they dissolve and/or otherwise prepare for consumption at their tanning plants. The extract output of the two paper manufacturers is limited to chestnut, all of it being produced for sale.

The annual cut of chestnut is roughly estimated at 850,000,000 board feet, of which about 30 per cent goes to extract plants. This annual consumption represents only about 5 per cent of the standing timber, but government entomologists have stated that the supply may run out in 10 to 15 years, owing to ravages of a blight, concerning which the following is quoted from a report of the Forest Service of the Department of Agriculture:

The entire stand of chestnut in the United States is threatened with extinction from a fungus disease known as the "chestnut blight." This blight first attracted attention in 1904 in New York City and has since spread over New England and New York, and southward and westward into Virginia and West Virginia. Every attempt to check the spread of the blight has met with failure. It is estimated that nine-tenths of the remaining stands of chestnut in the Southern Appalachians will be heavily infected by the blight by 1935 unless something occurs to stop it.

The quebracho branch

The quebracho branch of the industry includes three firms. (1) One is a company manufacturing dyes and tanning materials which operates a special plant to produce fresh quebracho extract from logs received from an affiliated company in Argentina. (2) The second one is a domestic corporation, which is a subsidiary of a British company in Argentina from which it receives quebracho logs and solid quebracho extract. This corporation, operating a domestic plant produces fresh quebracho extract from the imported logs and also dissolves and/or otherwise prepares for sale to tanners the imported solid quebracho extract. This company also sells the imported solid extract directly to tanners on dollar terms of f.o.b. cars, American ports. (3) The remaining one is an American company, operating extensively in Paraguay, which receives solid quebracho extract from its foreign plant and dissolves and/or otherwise prepares it in a domestic plant for sale to tanners. This company also offers the imported solid quebracho extract to tanners on terms of f.o.b. cars, American ports. This third firm has been operating under the tanning extract industry code, although the business of dissolving solid extract was outside the scope of the industry as defined in the original code. An amendment was approved on October 9, 1934, which clarified this company's membership status.

The miscellaneous branch

The so-called miscellaneous branch of the tanning extract industry is composed of two companies. One manufactures for sale a wide range of extracts from domestic and imported materials, including solid quebracho. The other company supplies tanners with a spruce extract obtained as a by-product in sulphating pulp preliminary to paper manufacture.

Complainant's interest in imports

The complaint, directed exclusively against imports of solid quebracho extract, has been filed by the code authority for the tanning extract industry, the membership of which includes two companies which normally handle 70 per cent of imports into the United States of that extract. Only one of these two companies is directly represented on the code authority. The industry membership also includes extract-plant subsidiaries of certain tanners who are responsible for another 5 per cent or more of the imports. These subsidiaries have no direct representation on the code authority.

Concentration of control

Control of production in the tanning extract industry is highly conccentrated. Over 75 per cent of the total output is controlled by three comoanies. Furthermore, the major portion of the domestic fresh quebracho extract output is produced by the company which usually imports a substantial percentage of the solid quebracho extract.

Course of Domestic Production

Approximately 90 per cent of the domestic production of vegetable tanning extracts - exclusive of dissolving the imported solid quebracho extract - consists of chestnut extract and of fresh quebracho extract produced from imported logs; the balance is derived from myrabolan, wattle, summac, oak, spruce, etc. The following table shows the trends of domestic production of both chestnut and fresh quebracho extracts and in comparison the trend of vegetable-tanned leather production.

It may be noted that domestic production of chestnut extract followed closely the downward trend of production of vegetable-tanned leather. Despite the fact that there was a heavy importation of solid quebracho extract in the latter half of 1933 and early in 1934, the production of chestnut extract rose considerably during the third quarter of 1933, and has maintained a relatively high level through the first six months of 1934. Apart from the table it may be observed that at the same time the relatively high level of production of vegetable-tanned leather has resulted in a decline in the chestnut extract stocks in the hands of all producers. According to a statement of the code authority, these stocks dropped from 57,528,000 pounds in July, 1933, to 55,967,000 in April, 1934.

The domestic production of fresh quebracho extract likewise kept pace relatively with production of vegetable-tanned leather until 1931, after which time it dropped abruptly to a decidedly lower level. Complainant states that present quotations of domestic fresh quebracho are below cost of production. If this statement is correct with regard to present conditions, and considering the trend in the cost of imported quebracho logs and other costs, it appears that the domestic fresh quebracho plants have been unable to compete successfully with the imported solid extract since 1931 when there occurred in the price of the latter a sharp drop from the artificially high level maintained prior to that time by the Argentine cartel.

Exports

Chestnut is the only domestic extract exported in any volume, Canada being the principal market with smaller amounts going to Cuba, Germany, and the United Kingdom. The annual export totals given in Table 2, converted to 25 per cent tannin content, are taken directly from the complaint. They are based on exports as reported to the Tanners Council Statistical Bureau by the various chestnut plants.

Table 1: Trend of production of chestnut extract and fresh quebracho extract, compared with production trend of vegetable-tanned leather.

Period	Production in thousands of pounds of 25 per cent tannin 1/		Indices of trend. Average 1927-29 production = 100		
	Chestnut extract	Fresh quebracho	Chestnut extract	Fresh quebracho	Vegetable-tanned leather 2/
			By years		
1927	323,527	115,764	)	)	)
1928	384,429	3/	) 100	)4/ 100	) 100
1929	323,427	125,385	)	)	)
1930	336,162	3/	98	3/	94
1931	269,284	92,891	78	77	76
1932	218,089	39 470	63	33	64
1933	241,770	44,022	70	37	67
			By quarters		
1933					
January - March	45,301	6,967	53	23	2/
April - June	55,255	10,498	64	35	3/
July - September	69,863	13,481	81	45	3/
October - December	71,351	13,076	83	43	82
1934					
January - March	69,969	10,376	81	34	83
April - June	69,907	10,664	81	35	89

1/ Compiled by the Tanners Council of America, acting for the American Tanning Extract Manufacturers Association, as reported by complainant.
2/ Based on data furnished by Tanners Council of America.
3/ Not available.
4/ 1927 and 1929 = 100.

Table 2: Trend of exports and domestic production of chestnut extract in terms of 25 per cent tannin content.

(In thousands of pounds)

Year	Domestic production	Exports	Ratio of exports to domestic production
			Per cent
1927	323,527	19,784	6.1
1928	384,429	25,291	6.6
1929	323,427	29,968	9.3
1930	336,162	25,855	7.7
1931	269,284	26,968	10.
1932	218,089	36,178	16.6
1933	241,770	45,752	18.9

As shown in the above table, during the period from 1927 to 1933 domestic production declined 25 per cent, while exports increased 131 per cent. This resulted in an increase in the ratio of exports to domestic production from 6 per cent in 1927 to 19 per cent in 1933. Available statistics indicate that the trend of exports has continued upward during 1934.

Quebracho Logs

Quebracho logs which constitute the raw material for the two domestic producers of fresh quebracho extract are imported into the United States free of duty. Table 3 shows the trend of these imports by years since 1926 in total and by customs districts. Quebracho logs yield approximately 21 per cent tannin, therefore their potential yield in terms of 25 per cent tannin extract amounts to about 84 per cent of the weight of the logs. These logs can be stored for an indefinite period. It is reported that the domestic industry has a supply considerably in excess of its requirements.

Table 3: Annual imports of quebracho logs, by customs districts and total, with indication of potential yield of extract.

Year	Mobile	New York and Philadelphia 1/	Total imports	Total potential yield of extract 2/
	Tons of 2,240 pounds			In thousands of pounds
1926	5,974	26,094	32,068	60,352
1927	17,170	43,756	60,926	114,663
1928	28,320	47,675	75,995	143,023
1929	23,860	46,748	70,608	132,884
1930	14,492	29,622	44,114	83,023
1931	15,344	40,052	55,396	104,255
1932	4,954	8,429	13,383	25,187
1933	-	20,115	20,115	37,856
1934 (6 mos.)	-	36,710	36,710	69,088

1/ Operations of one producer transferred from New York to Wilmington in 1927.
2/ Twenty-five per cent tannin content.

The Quebracho Industry in Argentina and Paraguay

The quebracho tree is only native to South America and commercially exploited in Argentina and Paraguay. The heartwood of this tree from which the extract is obtained is extremely hard, having a density of 78 pounds per cubic foot. Extraction was first undertaken in Argentina about 1880, but did not reach substantial proportions until early in the present century when plants were established by the British Forestal Company, and several German and French companies. As early as 1878 a small plant was erected in France for the extraction of tannin from imported quebracho logs. Further development later took place in several European countries. The exportation of the solid extract produced by plants in Argentina and Paraguay increased rapidly after the World War, and during the same period the exportation of logs declined. Comparative figures showing the relative importance of the two types of exports are given in Table 4.

Table 4: Exports of quebracho logs and extract from Argentina and Paraguay, both in terms of obtainable extract of 25 per cent tannin content.

(In thousands of pounds)

Period	Logs - tannin content	Solid quebracho extract
Annual averages		
1891-1900	217,473	7,785
1901-1910	472,515	179,562
1911-1920	377,860	596,295
1921-1930	212,867	1,267,160
Annual totals		
1925	206,941	1,739,320
1927	240,204	1,563,467
1928	309,945	1,585,091
1929	300,733	1,186,211
1930	262,202	1,109,736
1931	158,653	1,315,144
1932	101,560	1,472,966
1933	187,700	1/1,600,000

1/ Estimated.

The industry in Argentina and Paraguay expanded more than the world demand for quebracho justified and, after repeated attempts to control output, the Forestal Land Timber and Railways Company, Ltd., which has always been the largest producers, arranged exclusive export marketing contracts with the other producers. This cartel arrangement functioned satisfactorily from about 1927 to the middle of 1931 by maintaining prices at an artificially high level. During the 12 months after its dissolution, the price of quebracho dropped nearly 60 per cent, and has continued at a relatively low level ever since.

The quebracho extract producers in Argentina and Paraguay have been striving, so far unsuccessfully, to devise a substitute plan for the cartel in order to restore the industry to a profitable basis. The producers, with the exception of three large companies which are foreign-controlled, presented a petition to the Argentine Government proposing that the Government take control of the quebracho extract industry for the purpose of rationing production on a level with consumption, and also urging the Government to embargo the export of logs. The petition asserted that (1) the productive capacity of the plants in Argentina and Paraguay was sufficient to supply world needs for quebracho extract; (2) foreign plants using Argentine logs depended upon high tariff barriers to offset the handicap arising from their uneconomical location; (3) the greater value of the solid extract would yield additional foreign credits to bolster the exchange value

of the peso; (4) the value of foreign plants would not be destroyed if log exports were prohibited since these plants could make extracts from other materials and continue their present practice of preparing liquid extract from imported solid quebracho; and (5) ten of the leading companies suffered an average loss of 3.7 per cent on capital investment in 1932.

Two of the larger companies, which are foreign-controlled, oppose the plan advanced by the remaining producers insofar as it relates to the embarg of log exports for the reason that they operate fresh extract plants in foreign consumer markets.

Table 5 compares relative productive capacity, total exports, and exports to the United States, of the leading producers of solid quebracho extract in Argentina and Paraguay. Two of these companies, ship to corporate affiliates in the United States which quote to North American tanners on dollar terms, f.o.b. cars, American port. These two companies are very large, and have played a prominent part in the United States import market for quebracho in the past. The importance of one of them in this respect is greater than its shipments of solid extract indicate, since it also supplies logs to its fresh extract plant in the United States.

Table 5: The quebracho extract industry in Argentina and Paraguay, with indication of capacity and exports, in metric tons of solid of 63 per cent tannin content.

Name of producer	Registered capital	capacity production	Export shipments To all countries 1932	to U. S. Ports 1932	1933
	1,000 pesos				
		Operating in Argentina			
Forestal	54,117	165,156	97,145	14,192	31,097
Colorantes	1,000	9,600	3,630	483	529
Del Norte	500	6,000	5,900	392	1,931
Pfahl	500	2,000	318	-	-
Curtiunidas	500	18,000	-	-	-
Del Yuto	600	6,000	544	323	-
Fusianados	7,000	36,000	16,040	1,922	-
Fontana 1/	4,000	20,500	-	-	-
Chaquana	5,114	18,000	758	1	845
Noetinger	2,415	16,800	15,126	367	-
Atorrasagasti	1,000	15,000	2,440	1,494	249
Curtientes	500	15,000	12,155	11,725	7,498
Francia-Arg	800	7,596	852	5	-
Jalon	525	7,488	-	-	-
Samuhi	1,400	7,200	7,454	3771	2,550
Fern,Fontana	600	6,980	1,732	444	257
Noruego-Arg	750	5,400	1,723	350	-
Welbers	1,000	4,500	4,969	405	446
Las Palmas	600	4,000	135	-	394
Dubosc	1,108	7,000	4,909	752	299
Formosa	2,000	18,000	9,216	151	1,560
		Operating in Paraguay			
International Products Co.	3,000	36,000	22,902	6,983	12,241
Carlos Casado	7,955	21,600	8,369	-	-
Puerto Sastre	4,824	27,000	9,590	42	414
Puerto Cuarani	1,750	15,600	3,031	2,606	303

1/ Export handled by Forestal.

Course of Imports

Table 6 shows the trend of the quantity, value, and unit value of imports of solid quebracho extract which is the subject of complaint. The increase in imports in late 1931 and during 1932 was due in part to the cheaper price of the solid extract resulting from breakdown of the Argentine export cartel.

The trend in 1933 was influenced by speculative purchases made in anticipation of higher prices resulting from the rise in the dollar value of the peso.

A comparatively insignificant proportion of the imported extract is reexported, principally to Canada. The trend of reexports has been downward since 1926, when they amounted to six tenths of 1 per cent of the amount of imports.

Table 6: Imports of solid quebracho extract, in terms of 25 per cent tannin content.

	Thousands of pounds	Thousands of dollars	Dollar value per 100 pounds
		By years	
1926	284,273	3,721	$1.31
1927	311,910	4,904	1.57
1928	270,528	4,301	1.59
1929	228,969	3,744	1.63
1930	243,975	3,828	1.57
1931	263,377	2,495	.98
1932	290,344	1,798	.62
1933	345,366	2,545	.74
		By quarters	
1933			
January-March	66,556	374	.56
April-June	37,280	214	.57
July-September	87,572	625	.71
October-December	153,958	1,331	.86
1934			
January-March	122,909	1,073	.87
April-June	65,626	519	.79

Since 1926, New York has dropped substantially in importance as a port of entry for solid quebracho extract, and the customs districts of Virginia and Maryland have increased in importance. Table 7 shows the percentage of total imports through the principal customs districts since 1926.

Table 7: Percentage of total imports of solid quebracho through principal customs districts.

Period	New York	Massachusetts	Philadelphia	Virginia	Md.	San Fran.	Connecticut
By years							
1926	79	9	2	6	0.5	4	-
1927	71	3	4	13	6	3	-
1928	64	7	7	18	3	1	-
1929	44	9	21	22	4	.8	-
1930	52	15	10	24	17	.7	2
1931	37	24	11	16	11	.7	1
1932	51	25	6	15	19	.6	2
1933	29	0	8	26	24	.7	3

Ratio of imports to production

Imports of solid quebracho extract come into direct competition with domestic fresh quebracho extract, and, to some extent, with domestic chestnut extract. Table 8 shows a comparison of the trend of domestic production of fresh quebracho and of chestnut extracts with the trend of imports of solid quebracho extract.

Table 8: Ratio of solid quebracho extract imports to domestic production of chestnut and fresh quebracho extracts.

Period	Domestic Production			Imports of solid quebracho	Ratio of imports to production
	Chestnut	Fresh quebracho	Total		
	In millions of pounds of 25 per cent extract				
By years					Per cent
1927	324	116	439	312	71
1929	333	120	449	229	51
1930	336	1/	1/	244	1/
1931	269	93	362	253	70
1932	218	39	257	290	113
1933	242	44	286	349	121
By quarters					
1933					
January-March	45	7	52	67	127
April-June	55	10	65	38	57
July-September	70	13	83	88	105
Oct.-December	71	13	84	154	182
1934					
January-March	70	10	80	123	153
April-June	70	11	81	66	81
By months					
January	25	4	29	65	224
February	21	3	24	30	125
March	24	3	27	27	101
April	24	3	27	22	80
May	23	4	27	25	94
June	23	4	27	19	71
July	-	-	-	25	-
August	-	-	-	17	-

1/ Production not reported.

From the foregoing table, it may be noted that the ratio of imports of solid quebracho extract to domestic production of chestnut and fresh quebracho extracts was much higher in 1932 and 1933 than in former years. As explained in detail elsewhere in this report, this was principally on account of increased imports owing to a sharp decline in the price of the imported solid quebracho extract which resulted from two factors: (1) Breakdown of cartel control in Argentina, and (2) the decline in the exchange value of the Argentine peso.

This sharp decline in price made the domestic production of fresh quebracho from the imported logs relatively unprofitable.

As shown in Table, 8, the production of domestic extracts increased substantially during 1933. The sharp increase in the ratio of imports to production in the latter part of 1933 and early 1934 resulted from abnormally large imports in anticipation of rising costs due to the depreciation of the United States dollar.

Monthly data in the table show that, while the domestic production of chestnut and of fresh quebracho extracts remained relatively high through the final month reported by the complainant, the imports of solid quebracho extract declined almost steadily from January to August of 1934. As a consequence, in June, 1934, the ratio of imports to production declined to what might be termed a normal level, namely, that which prevailed in 1927 and 1931.

Important Competitive Factors

Competition between vegetable and chemical tanning agents

In addition to the extent to which leather products have been displaced by rubber substitutes - particularly rubber and textile composition belting and shoe soles - vegetable tanning agents have suffered somewhat in competition with chemical tanning agents. This is indicated in the following table showing the trend of production of vegetable-tanned and chemical-tanned heavy leather in recent years.

Table 9 - Trend of production of vegetable-tanned and chemical-tanned heavy leather.

	Total of tanned cowhides 1/	Ratio of vegetable - tanned to total 2/	Indices based on 1927 production	
			Vegetable - tanned 2/	Chemical - tanned
	In thousands	Per cent		
1927	21,824	47.7	100	100
1928	20,240	50.4	98	88
1929	19,147	49.4	91	85
1930	17,671	50.4	91	72
1931	16,238	47.1	73	75
1932	14,583	44.3	62	71
1933	16,941	39.8	65	89

1/ From "Survey of Current Business."
2/ Data on production of vegetable-tanned leather furnished by Tanners Council of America.

As shown in the above table, vegetable tanning agents have encountered gradually increasing competition from chemical agents - principally chrome - during the past several years. As compared with a drop of roughly 22 per cent from 1927 through 1933, in the number of cattle hides tanned, the consumption of vegetable tanning agents declined 35 per cent, and that of chemical agents declined only 11 per cent.

Inter-relationship of vegetable tanning extracts

Vegetable tanning agents utilized by manufacturers of leather, either in the raw form or as extract, are commonly classed in two groups - pyragallols and catechols - each of which has properties that are essential in the proper tanning of heavy leather. Chestnut is the most important pyragallol and quebracho the principal catechol. Chestnut and other pyragallol agents impart plumpness, durability, cutting quality, and dull yellow or brown color to leather. Quebracho and other catechols impart flexibility, resistance to water and chemicals, and brighten the color of leather and hasten the tanning process. The distinct properties of each group fix the relative amounts of the two which tanners must use in the preparation of blends needed in the tanning of leather to meet particular specifications. Contrasted with the limited interchangeability between groups, in most uses various agents within each group - for example, the catechols: quebracho and wattle - may be substituted for each other to a considerable extent without altering the character of the tanned leather.

With reference to the question of competition between chestnut and quebracho extracts, the relatively narrow limits within which they may be substituted for each other in the bulk of the leather tanned, of necessity limits the extent of the actual competition between them. As a matter of fact, the demand for leather over a period of years has been predominantly for those grades and qualities in the tanning of which the range of substitution between chestnut and quebracho extract was limited to roughly 10 per cent. To that extent, the tanner was able to take advantage of a relatively low price for one or the other extracts in order to reduce his raw material costs.

Price relationships

The price of imported solid quebracho directly influences the price of domestic fresh quebracho for the reason that the two extracts are interchangeable in use. In contrast, the data shown in Table 10 indicates that there is little, if any, correlation between the price of imported solid and the price of domestic chestnut extracts.

The price of chestnut extract is more directly influenced by conditions in the leather tanning industry than by the quantity or price of the quebracho imports.

In fact, since September, 1933, the price of chestnut extract has been slightly higher than the average for the years 1928 and 1929, while the price of imported solid quebracho extract has been approximately 40 per cent below the level for the same years.

Table 10; Comparison of trends of average domestic market prices for principal tanning extract and general wholesale prices.

Statistical period	Indices of prices 1/			
	Imported solid quebracho 2/	Fresh domestic quebracho	Chestnut	General wholesale prices 3/
1926	100	100	100	100
1927	112	100	104	95
1928	116	100	90	97
1929	117	108	88	93
1930	115	100	92	83
1931 -				
January-June	99	87	92	75
July-December	62	67	85	71
1932 -				
January-June	45	67	82	66
July-December	45	67	74	64
1933 -				
January-March	42	67	74	60
April-June	48	67	74	63
July-September	69	67	82	70
October-December	72	67	92	71
1934 -				
January-March	65	79	92	73
April-June	65	79	92	74

1/ Extract prices furnished by complainant.
2/ Prices quoted by "regular" importers, plus duty.
3/ Bureau of Labor Statistics.

Trend of prices in relation to consumption

The next table shows a comparison of the effect of the relative price changes of imported solid quebracho, domestic fresh quebracho, and domestic chestnut extracts, upon the extract consumption per hide of leather tanned by vegetable tanning agents.

The table shows that imported solid made substantial gains at the expense of the domestic fresh quebracho extract quoted at a premium. However, despite the fact that the price of the imported solid extract was very much below the price of domestic chestnut extract, the per-hide consumption of chestnut has continued at much the same level as formerly, indicating that the two extracts have rather definite limits of interchangeability.

Table 11: Comparison of the trend of prices and the per-hide consumption of chestnut and quebracho extracts 1/

	Indices of -					
	Chestnut		Quebracho			
			Imported solid		Domestic fresh	
	Prices	Per-hide consumption	Prices	per-hide supply	Prices	Per-hide supply
1927	100	100	100	100	100	100
1929	85	106	104	81	108	120
1931	85	109	72	110	77	109
1932	75	97	41	150	67	55
1933	77	100	51	171	67	59

1/ No allowance has been made for changes in warehouse stocks. However these were not particularly significant until 1933.

Note: Per-hide consumption of chestnut extract in 1927 was 29.2 pounds, of imported solid quebracho extract 30.0 pounds, and of domestic fresh quebracho 11.1 pounds.

The limit of displacement of chestnut by quebracho extract is further indicated by the fact that chestnut imports into Germany held up well during the period 1928-1933, whenHamburg prices started at £24 per metric ton for Argentine quebracho extract and £23 for Italian chestnut, and finished at £13 and £25 respectively.

Currency fluctuations

Since 1931 the Argentine peso has been pagged successively to the pound sterling, the dollar, the French franc, and then again to sterling. Table 12 shows the trend in the gold value of the peso and of the dollar and the exchange value of the two currencies. It may be noted that the gold value of the peso declined approximately 40 per cent from 1928 to April, 1933, when the dollar began to depreciate. During 1933, when the dollar was depreciating most rapidly, the gold value of the peso remained steady, resulting in an improvement of approximately 57 per cent im the peso-dollar exchange from March to Nov-

ember of that year. In November, 1933, the Argentine Government arbitrarily reduced the value of the peso about 17 per cent.

Table 12: Course of fluctuations in United States and Argentine currencies.

	Indices of trend in gold exchange value based on 100-currency's par: Peso	Dollar	Peso-dollar exchange rate United States cents per gold peso	Appreciation of peso against the dollar after 1932
Par	(100)	(100)	(96,48)	
1928 average	100	100	96,48	
1929 average	99	100	95.13	
1930 average	87	100	83.51	
1931				
January	72	100	69.70	
October	64	99	52.00	
1932				
January	60	100	58.27	
October	61	100	58.58	
1933				
March	60	99	58.30	-
April	60	96	60.49	3
June	60	82	71.06	21
August	60	73	79.43	36
November	60	63	92.04	57
December	50	64	75.75	29
1934				
January	50	63	76.14	30
March	48	60	77.18	32
June	47	59	76.50	31

Source: Federal Reserve Bulletin.

Influences of currency fluctuations on quebracho import volume

The Buenos Aires market quotation for solid quebracho extract, which had stood for some time at around 96 pesos per metric ton, dropped rapidly after the breakdown of the export cartel late in 1931, reaching a low of 46 pesos late in 1932.

Gradual devaluation of the peso during 1931 and 1932 accentuated the decline in the cost of the solid extract in terms of dollars.

During the ten-month period from February through November of 1933 when the Buenos Aires quebracho market price remained constant at 59 pesos, the full 57 per cent improvement in the peso in terms of dollars was reflected in costs of quebracho imported into the United States. Import costs dropped at the end of November in direct ratio to the 17 per cent devaluation of the peso.

Inasmuch as the solid quebracho extract can be readily stored, heavy purchases by American tanners and accumulation of stocks by importers during 1933 were motivated by the fact that the price of solid quebracho (already at low level following the breakdown of the Argentine cartel), was bound to move upward as a result of the advance of the peso-dollar exchange. This situation doubtless furnishes the principal explanation for the exceptionally high volume of imports during the second half of 1933. The influence of the exchange situation of speculative purchases is further indicated by the degree to which the volume of imports declined during the period of relative exchange stability, i.e., from January to August, 1934.

Structure of the Solid Quebracho Extract Importing Business

Two prominent companies with sales offices in New York solicit orders for imported solid extract, quoting in dollars on landed basis. These two firms are members of the tanning extract industry operating under the code. The complaint filed by the code authority prays for relief from imports received through other channels at "distressed prices." It designates these two companies as "regular" importers and describes other imports as handled by "independent" importers.

American tanners have the option of making their solid extract purchases through those two "regular" import firms, or of purchasing direct in the Buenos Aires market. In acquiring direct supply of extract, the American tanner usually entrusts the purchase to the branch office or agency in Buenos Aires through which he regularly receives the bulk of his supply of raw hides. The tanner may also place his direct-purchase order through brokers in New York connected with Argentine shippers.

By making his extract purchases from "regular" importers, the domestic tanner has effective means of redress for claims, secures prompt delivery, and avoids tie-up of funds in irrevocable letters of credit. Furthermore, he knows his costs without bothering with the purchase of foreign exchange in a restricted market. On the other hand, if the American tanner carefully studies the Buenos Aires market and is represented there by a competent agent, he is in a position occasionally to buy closer to the market, but not, however, without certain attendant risks in the event of deficient weight, quality, etc. Purchases through brokers in New York involve even greater difficulties as far as concerns redress for claims. Follow-up orders placed by tanners are contingent upon satisfaction. The tanner has a check on quality in the course of utilizing the extract, and he is able to measure his cost in terms of net tan in content.

Table 13 shows exports by individual shippers in Buenos Aires during recent quarters, as compiled from official Buenos Aires port records by a private statistical agency. The shipments shown for the first three companies were made to affiliated companies in New York, i.e., "regular" importers. Shipments made by the other firms listed in the table were invoiced to American companies described by complainants as "independent" importers. The record of shipments shown in Table 13 indicates that American brokers took very little part in the abnormal volume of business during the latter part of 1933, and that the Buenos Aires branch offices or hide purchasing agents of American tanners handled the bulk of the "independent" business during that period. The table also shows that shippers to so-called "independent" importers handled roughly 50 per cent of all shipments to the United States during the first half of 1934, as compared with only 21 per cent during the first quarter of 1933.

Table 13: Solid quebracho extract despatched to the United States by principal shippers in Buenos Aires during recent quarters, in terms of extract of 25 per cent tannin content.

(Unit-1,000,000 pounds)

	Oct.-Dec. 1932	Jan.-Mar. 1933	Apr.-June 1933	July-Sept. 1933	Oct.-Dec. 1933	Jan.-Mar. 1934	April & May
Shipments to "regular" importers							
Forestal	33.1	22.8	21.0	67.5	81.6	18.2	13.0
International Products Company	19.6	11.0	18.2	28.6	22.8	16.7	10.1
Cie Francia	3.0	3.7	.6	-	-	-	-
Shipments to "independent" importers							
Tanners Trading Co.	22.	6.4	8.3	20.2	39.8	23.9	15.6
Rod. Silva	-	-	3.5	3.6	6.6	9.3	3.8
Clarendon	2.8	1.6	2.0	1.1	-	1.5	.9
Kistler Trading Co.	-	-	-	-	3.1	3.1	-
Oaksheet	1.8	.9	1.6	2.5	2.4	-	.7
Otto Lacker	.3	.9	.6	.6	-	-	-
Williams Chemical Co.	-	-	-	-	-	2.4	1.2
Total	82.6	47.3	55.8	124.1	146.3	75.1	45.3
Per cent shipped to "regular" importers	66%	79%	71%	77%	71%	46%	50%

Source: Boletin Maritino.

The Tanners Trading Company, shown in Table 12 to be the principal shipper to "independent" importers, was established some years ago in Buenos Aires by a group of prominent American tanners to handle their purchases of hides. Rod Silva conducts a commission business in Buenos Aires acting as representative of a number of American tanners for their purchases of hides on letters of credit. Clarendon is a hide buyer acting as commission agent for several American tanners. The Kistler Trading Company is a subsidiary of an American tanner. Owing to their close and long-existing relation with American tanners, shipments of these four firms undoubtedly resulted from buying orders placed by the tanners without resort to American brokers as intermediaries. It is possible that some of the shipments were invoiced to third parties in New York or other ports, but these third parties served as little more than customs brokers and freight forwarders.

Otto Lacker and Oaksheet serve in some instances as hide buyers for American tanners, but they are identified also with hide brokers in the United States. Extract purchases placed by tanners through American brokers would probably be passed to one or the other of these two firms. The shipments of the Williams Chemical Company, shown in the two final columns in Table 12, are reported to have been offered to American tanners through brokers.

The statemnent is made in the complaint that "it is not unusual to find South American firms not directly interested in the Quebracho business who purchase Quebracho in the Argentine and Paraguay, shipping it to the United States for sale in order to establish credits in this country and in that way evade the Argentine capital export prohibition." Available information points to the conclusion that this type of transaction was not frequent or important in the quebracho extract export business. It involved circumventing the system of foreign exchange control then exercised by the Argentine Government. Quebracho extract was prominent among the export commodities for which the shipper had to show actual sale of his foreign currency draft to the Banco de la Nacion at the official exchange rate, before he could obtain export despatch papers. Even if an importer who had been refused foreign exchange had been able to convert his peso account into a commodity, such as quebracho extract, he still would have had to sell his foreign draft covering the export sale to the Banco de la Nacion before he received his shipping permit.

Causes of Increased Resort to Direct Purchase

Table 14 indicates the rising costs of the solid extract which prompted American tanners to order beyond current needs, both by direct purchase and through the intermediary of "regular" importers. An additional factor, which appears to have encouraged direct purchase during certain late months in 1933, was the abnormal spread between the cost of direct purchases and the cost of purchases from "regular" importers. The two final columns in the table give a comparison of these two costs, up to payment of duty. It will be noted that from the normal amount of roughly 10 cents per hundred pounds, this spread increased to over 30 cents during certain months of active dollar depreciation. This probably resulted from the fact that the "regular" importers, presumably to insure coverage of higher replacement costs, increased their quotations at a faster rate than the actual rate of increase which took place in the cost of direct purchases. It will be noted that this price spread was reduced in December by a decrease in the quotations of the "regular" importers. Consequently, the price spread, while still abnormal, was less in June, 1934, than during the third quarter of 1933.

Table 14: Comparison of Buenos Aires market prices and import unit values; also comparison of landed costs of direct purchases in the Buenos Aires market and ex-dock purchases

Month	Buenos Aires market F.A.S. quotation 1/		Average unit value of imports for the month	Landed cost of direct purchases in Buenos Aires market	Ex-dock quotation of domestic "regular" importers 3/
	As actually quoted	Converted to U.S. currency 2/			
	Gold pesos per metric ton	In cents per 100 pounds of 25% extract			
1931					
June	96	109	136	126	134
September	78	75	82	92	98
December	66	63	73	77	89
1932					
March	58	55	71	69	71
June	51	48	68	62	71
September	46	44	58	58	71
December	52	49	55	63	71
1933					
March	59	56	63	66	67
April	59	58	57	68	67
May	59	65	57	75	80
June	59	68	59	78	80
July	59	77	59	87	98
August	56	72	73	82	107
September	55	77	78	87	120
October	56	78	82	88	120
November	59	88	84	98	120
December	61	75	94	85	103
1934					
January	63	78	95	88	103
February	60	74	80	84	103
March	59	74	78	84	103
June	59	73	79	83	103

1/ F.A.S. quotation as posted by the Buenos Aires Board of Trade for solid quebracho extract on first Saturday of month indicated.
2/ Converted at average exchange for the month indicated.
3/ Furnished by complainant.

A study of unit values of monthly exports of Argentine solid quebracho extract to the United States and to other countries does not reveal any invoicing to this country below the unit value of exports to other countries. Comparison of average monthly unit values shown in column 3 of the preceding table and the dollar equivalent of the Buenos Aires export market quotations, as shown in column 2, serves as another indication that shipments to this country have paid the full Buenos Aires export market price (if, in comparing these two columns, allowance is made for the normal lag between purchase in the Buenos Aires market and clearance through American ports).

Effect of the National Industrial Recovery Program

Effect on labor

Statistics relating to employment and payroll were submitted in support of the complaint for the two fresh quebracho extract plants and for eight chestnut extract plants operated by two companies out of a total of 19 plants in the chestnut branch of the domestic extract industry. These data, shown in Table 15, are believed to be sufficiently representative to indicate the general trends in the domestic industry, showing roughly the changes which have occurred since adherence to the President's Reemployment Agreement and during subsequent operation under the approved code for the tanning extract industry.

Table 15: Trend in employment, payroll, man-hours, and productivity of labor in the domestic tanning extract industry

Month	Extract output	Number of workers	Payroll	Man-hours	Average Output per man-hour	Payroll per man-hour
	1,000 lbs.		Dollars		Pounds	Cents
			Two fresh quebracho extract plants			
1929-July	10,614	142	12,749	29,118	365	44
1933-April	4,144	51	3,705	9,243	448	40
July	4,194	77	5,798	15,790	266	37
October	4,857	123	8,258	19,977	243	41
1934-April 1/	4,176	111	7,645	18,460	226	41
Percentage change since July, 1933	-4%	44%	32%	17%	-15%	11%
			Eight chestnut extract plants			
1929-July	15,572	470	38,385	124,193	124	30.9
1932-April	9,055	277	17,132	60,387	150	28.3
July	13,870	344	22,770	81,040	171	28.2
October	14,164	497	34,222	89,614	158	38.5
1934-April	14,815	492	30,642	78,760	188	38.9
Percentage change since July, 1933	7%	43%	35%	-3%	10%	38%

1/ Data for the month of May used for one plant.

From data in the foregoing table relating to the domestic production of fresh quebracho extract, it will be noted that the number of employees increased 44 per cent from July, 1933, just prior to adherence to the President's Reemployment Agrement, to April, 1934, and the monthly payroll increased 52 per cent during the same period. The 44 per cent increase in the number employed was paralleled by an increase of only 17 per cent in man-hours of employment. With practically no change in the level of production, the average productivity per worker declined 15 per cent.

From data in Table 15 relating to the operations of the eight chstnut extract plants, it willbo noted that the number of employees increased 43 per cent from July, 1933, just prior to adherence to the President's Reemployment Agreement, to April, 1934, and monthly payroll increased 35 per cent during the same period. In fact, employment in April, 1934, exceeded that for July, 1929. The increase in the number employed was offset by a sharp decline in the average hours of employment per worker, resulting in a net decrease in the total man-hours of employment. The 35 per cent increase in payroll was paralleled by a 7 per cent increase in total output and a 10 per cent increase in the productivity per worker.

Effect on costs of prodcution

Table 16 shows the trends of labor cost of the chestnut and fresh quebracho branches of the domestic tanning extract industry and the selling price of their products in comparison with the trend of the unit value of imports during recent years.

Table 16: Comparison of trends of labor costs, selling prices, and unit value of imports
(For 1,000 pounds of extract of 25 per cent tanning content)

Period	Eight chestnut extract plants		Two fresh quebracho extract plants		Value of imports 1/
	Labor cost	Selling price	Labor cost	Selling Price	
1929 - July	$2.50	$15	1.20	23.20	$16.25
1933 - April	1.89	12	.89	14.30	5.70
July	1.64	12.5	1.38	14.30	5.96
October	2.42	15	1.70	14.30	8.20
1934 - April	2.07	15	1.83	16.90	7.90
Increase since July, 1933	26%	20%	33%	18%	33%
Approximate ratio of labor cost to selling price	14%		11%		

1/ Solid quebracho extract.

It is not possible to state the amount of the total increase in costs of producing chestnut and fresh quebracho extracts for the reason that complainants have not submitted cost data other than the item of labor.

From data shown in Table 16, it will be noted that the labor cost per unit of chestnut extract increased 26 per cent from July, 1933, to April, 1934, and the labor cost per unit of fresh quebracho extract increased 33% during the same period. Roughly speaking, the labor cost item represented 14 per cent and 11 per cent, respectively, of the selling prices of the two products. Therefore, these increases represent less than a 3 per cent increase in total cost as indicated by selling prices, and this increase was offset by increases of 20 per cent and 18 per cent, respectively, in the selling prices of the two products during that period.

The Competitive Position of the Domestic Industry

The position of the domestic chestnut and fresh quebracho extract industry, as compared with the conditions prevailing prior to adherence to the National Recovery Program, may, in general, be characterized as follows:

(1) The domestic production of chestnut extract was substantially higher in the second quarter of 1934 than in the corresponding quarter of 1933. The domestic production of fresh quebracho extract remained at a uniform level during those two quarters.

(2) Exports of domestic chestnut extract rose from 37 million pounds in 1931 to 36 million pounds in 1932 and to 46 million pounds in 1933. Available statistics indicate that the trend has continued upward during 1934.

(3) Despite the fact that the price of the imported solid quebracho extract has been very much below the price of domestic chestnut extract, the per-hide consumption of chestnut has continued at approximately the same level as formerly.

The relatively high level of production of a vegetable-tanned leather resulted in a decline in the chestnut extract stocks in the hands of all producers, according to data submitted by the code authority, from 57,528,000 pounds in July, 1933, to 55,967,000 in April, 1934.

(4) After declining sharply from 1927 to 1929, imports of solid quebracho extract increased steadily in quantity, but declined steadily in value, to 1932. In 1933 there was a sharp upward movement in both quantity and value of imports, reaching a peak in the last quarter of 1933 and the first month of 1934. They have since declined to approximately the average level for 1931. The increase in imports of the solid extract after 1929 was paralleled by a decline in the imports of quebracho logs.

(5) The leveling off of import costs which occurred in December, 1933, owing to relative stability of dollar-peso exchange, removed the incentive for further advance purchases, and, as a result of the heavy speculative buying in 1933, import orders were reduced sharply and the trend of imports continued downward during the period of comparitive stability of dollar-peso exchange from January to August of 1934.

As a consequence, in June, 1934, the ratio of imports to production declined to approximately the level which prevailed in 1927 and 1931.

(6) The abnormal spread between "regular" importers' quotations for solid quebracho extract and the dollar cost of direct purchases which prevailed during 1933, owing to the fact that these quotations were increased at a rate faster than the increase in direct import costs caused by depreciation of the dollar, has since been reduced, thereby diminishing the incentive for direct purchases by tanners.

(7) As compared with a net increase in cost, due to increase in labor element, of less than 5 per cent of total cost as indicated by selling prices, and as compared with increases of 20 per cent and 16 per cent, respectively, in the selling prices of chestnut and fresh quebracho extracts, the unit val e of imported solid quebracho extract increased 33 per cent from July, 1933, to April,1934, and continued upward since that date.

Two important aspects of the problem in this case are presented graphically in Charts I and II, which follow.

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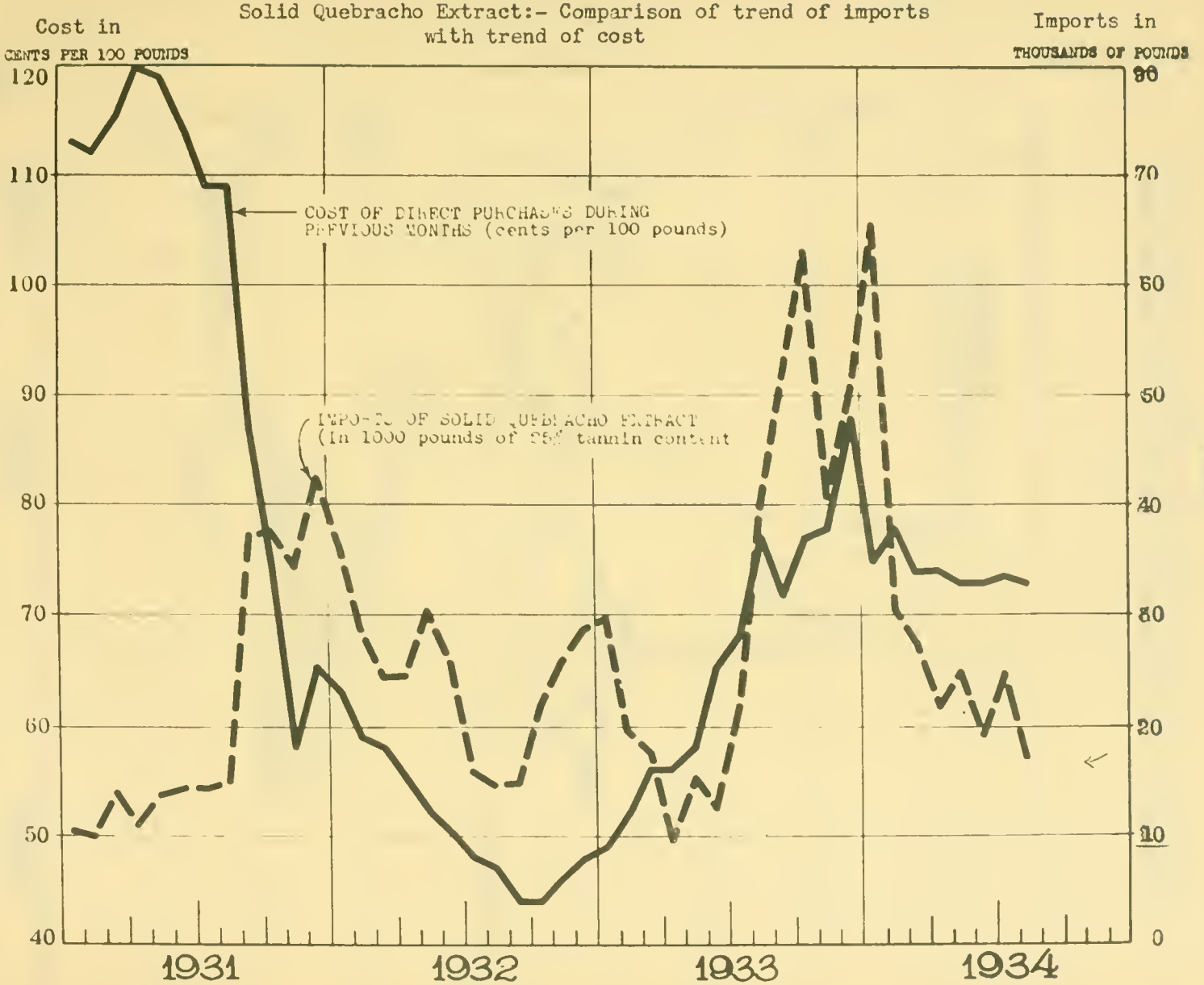
C H A R T I.

Solid Quebracho Extract:- Comparison of trend of imports with trend of cost



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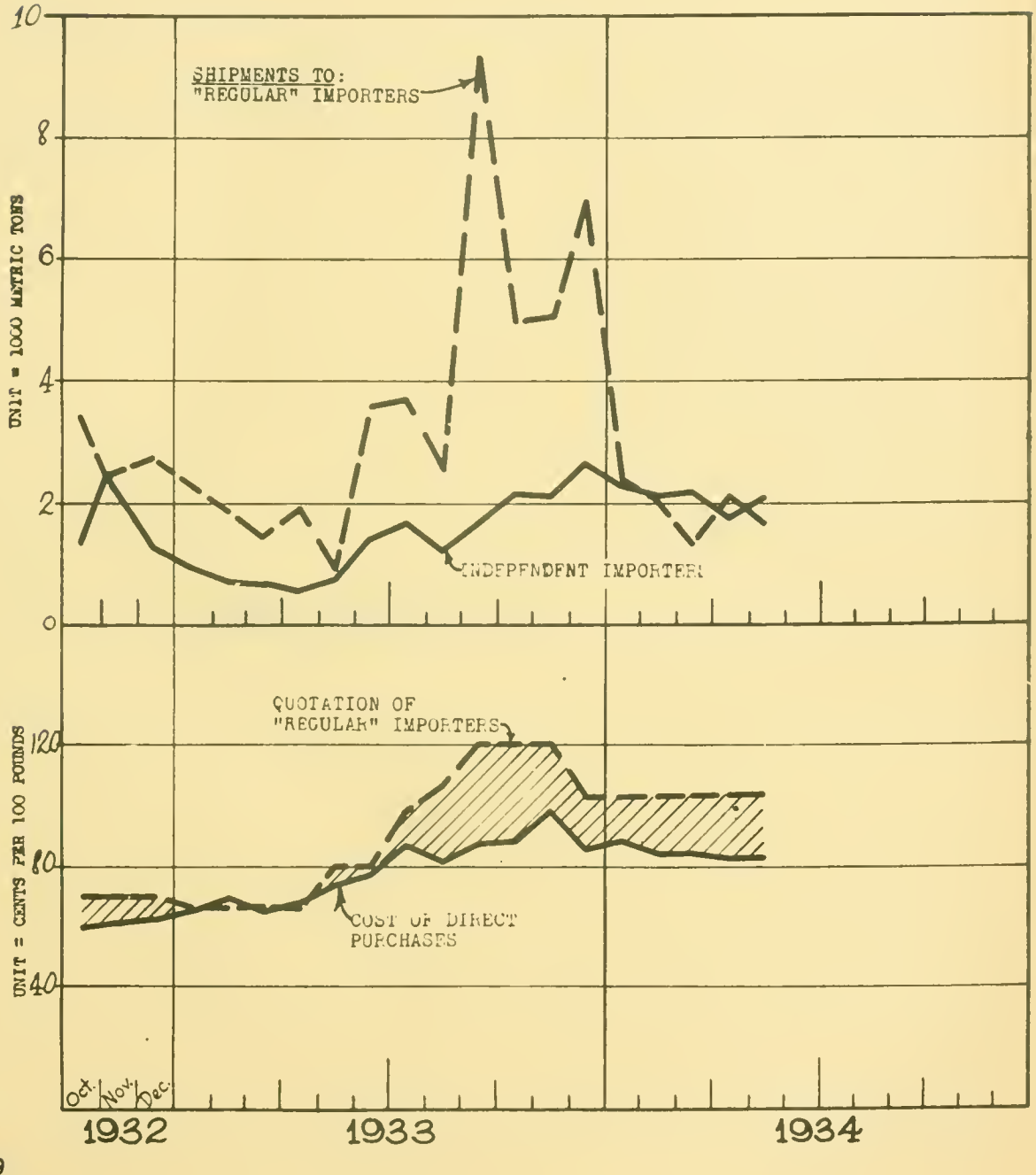
C H A R T II.

Solid Quebracho Extract:- Comparison of shipments to "regular" importers and to "independent" importers /A. by volume, and B. by cost to consumer/



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RUBBER ERASERS (No. 31)

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SURVEY OF INFORMATION

ON

RUBBER ERASERS

January, 1935

Complainants' Status under the National Industrial Recovery Act

This is a report on a complaint to the President with respect to imported rubber erasers filed August 20, 1934, by the Code Authority of the Rubber Manufacturing Industry, pursuant to Section 3 (e) of Title I of the National Industrial Recovery Act.

The eight complainant companies in this case operate under the Rubber Manufacturing Code, approved December 15, 1933, as members of the Stationers' Rubber Goods Subdivision of the Rubber Sundries Division of the Code; they represent 100 per cent of the rubber eraser industry.

The Rubber Manufacturing Code provides that any division of the industry may investiage the importation of competitive articles with a view to obtaining possible action under Section 3(e) of the National Industrial Recovery Act and report its findings to the Divisional Authority which shall inform the President through proper channels.

Subject of Complaint.

Description of commodity

The complaint is directed against the importation of all kinds of rubber erasers, exclusive of rubber pencil knobs and art gum erasers which contain no rubber. The imports consist mainly of the cheaper grades of double-beveled rubber erasers used largely by school children. Some of the imported erasers are sold in sets or separately as toys, such as animals, pencils, watches, blocks, etc.

Tariff treatment

Rubber erasers are dutiable at 25 per cent ad valorem under Paragraph 1537 of the Tariff Act of 1930, being classified as manufactures in which India rubber or gutta percha is the component material of chief value. They were dutiable at the same rate under Paragraph 1439 of the Tariff Act of 1922.

The Domestic Industry

The number of companies producing rubber erasers (not including pencil knobs and art gum erasers) increased from seven in the 1929-1935 period to eight in 1934, when a large manufacture of tires, rubber sundries, and other goods, began producing erasers in small qunatities. In 1929 there were

approximately 325 wage earners, earning a total yearly wage of about $275,000; in 1933, there were about 150 workers earning a total yearly wage amounting to approximately $140,000, according to data submitted in the complaint.

The seven principal establishments are all situated within the New York metropolitan area, largely in New Jersey. They accounted for virtually 100 per cent of domestic production of rubber erasers prior to 1934. Rubber erasers amounted to approximately 28 per cent in value of the production of all commodities by these establishments in the period 1931-1933.

According to the Census of Manufactures, three of the manufacturers of rubber erasers accounted for approximately 71 per cent in value of the total domestic output in the years 1929, 1931, and 1933.

Production in the United States

The following table shows the trend of domestic production of rubber erasers in quantity, value, and unit value since 1929, as reported by the Census of Manufactures. These data correspond closely to the value of sales reported in the complaint for these same years.

Table 1. - Rubber erasers: Domestic production in 1929, 1931 and 1933

Year	Quantity		Sales Value		Unit Value	
	Pounds	Ratio to 1929 (Per Cent)	Dollars	Ratio to 1929 (Per Cent)	Dollars	Ratio to 1929 (Per Cent)
1929	1,832,683	100.0	$1,065,186	100.0	$0.581	100.0
1931	1,306,143	71.	662,716	62.	.507	87.
1933	1,256,618	69.	577,489	54.	.460	79.

Source: Census of Manufactures.

The next table shows (1) total domestic production of erasers, (2) production of erasers reported to be most comparable with imports, and (3) the ratio of production of erasers most comparable with imports to total domestic production of erasers. Table 2 is based on data submitted by the complainants.

Table 2. - Rubber erasers: Production, 1929, 1931-September, 1934 1/

(Quantity)

Period	Total production	Erasers most comparable with imports	Ratio of erasers comparable with imports to total production
	Pounds		Per cent
Year			
1929	1,522,085	336,854	22
1931	1,164,012	242,755	21
1932	811,925	181,721	22
1933	969,820	200,144	21
First nine months			
1932	646,598	153,935	24
1933	675,752	154,176	23
1934 2/	889,862	182,028	20
By quarters			
1932			
January-March	166,123	39,885	24
April-June	227,398	43,312	19
July-September	253,077	70,738	28
October-December	165,327	27,786	17
1933			
January-March	164,664	46,184	28
April-June	202,336	39,284	19
July-September	308,752	68,708	22
October-December	294,068	45,968	16
1934 2/			
January-March	289,601	58,721	20
April-June	309,342	74,194	23
July-September	270,919	49,113	18

Source: Complaint.

1/ Production data for one producer not included in this table as they were not reported.

2/ Includes one producer not manufacturing prior to 1934.

From the foregoing table it may be noted that after a rather sharp decline from 1929 to 1932, the production both of all rubber erasers and of erasers most comparable with imports increased in 1933. Moreover, production in both categories was greater during the first nine months of 1934 than in the corresponding period of 1933; the rate of increase for each was approximately the same as shown by the fact that the ratio of production of erasers most comparable with imports to the total declined only 2 per cent from 1932 to 1934.

The production of erasers is seasonal, the peak being reached in the late spring or summer, usually in the third quarter, reflecting orders placed prior to the opening of the school year in September. Increased general business activity during the fall also contributes to this seasonal trend.

Exports

Course of exports

Since January 1, 1929, the United States has annually exported about 30 per cent in quantity and 34 per cent in value of its total rubber eraser production. The proportion of exports to total production in quantity declined from 31 per cent in 1929 to 27 per cent in 1933 and in quantity from 35 to 32 per cent over the same period.

The following table shows the trend of domestic exports of rubber erasers since 1929.

Table 3. - Rubber erasers: Domestic exports, 1929 to October, 1934

Period	Quantity	Value	Indices of trend 1929=100	
			Quantity	Value
	Pounds		Per cent	
Year				
1929	577,235	$367,542	100.0	100.0
1930	507,125	307,901	87.9	83.8
1931	400,576	239,179	69.4	65.1
1932	261,783	152,465	45.3	41.5
1933	337,481	184,112	58.5	50.1
By nine months				
1932 (Jan.-Sept.)	189,169	114,158	43.7	41.4
1933 Do.	231,638	123,052	53.5	44.6
1934 Do.	251,329	138,449	58.1	50.2
By quartors				
1933				
January-March	59,862	32,873	41.5	35.8
April-June	87,295	48,056	60.5	52.3
July-September	84,481	42,123	58.5	45.8
October-December	105,843	61,060	73.3	66.5
1934				
January-March	72,309	37,188	50.1	40.5
April-June	85,755	48,305	59.4	52.6
July-September	93,265	52,956	64.6	57.6
July	39,424	22,437	82.0	73.2
August	25,860	14,720	53.8	48.0
September	27,982	15,809	58.2	51.6
October	29,352	16,691	61.0	54.5

Source: Foreign Commerce and Navigation of the United States.

From the above table it may be noted that exports of rubber erasers declined from over 500,000 pounds in 1929 and 1930 to 262,000 in 1932, but rose to 337,000 pounds in 1933. Moreover, they increased from 232,000 pounds in the first nine months of 1933 to 251,000 pounds in the corresponding months of 1934.

The Foreign market

The domestic industry exports rubber erasers to a world-wide market, Germany being the largest customer, followed in order of importance in 1933 by the United Kingdom and Argentina. The distribution of foreign demand remained relatively stable from 1929 to 1933, as is indicated by the following table.

Table 4. - Rubber erasers: Domestic exports by countries, 1929 and 1933

Country	1929			1933		
	Quantity	Value	Ratio to total value	Quantity	Value	Ratio to total value
	Pounds		Per cent	Pounds		Per cent
Total	577,235	$367,542	100.0	337,481	$184,112	100.0
Germany	79,022	51,148	13.9	79,471	39,726	21.6
United Kingdom	77,720	33,708	9.2	30,087	15,089	8.2
Canada	46,743	27,855	7.6	30,051	9,520	5.2
Argentina	37,297	25,690	7.0	20,817	16,003	8.7
Japan	33,450	25,633	3.0	6,930	3,273	1.8
Denmark	30,086	19,202	5.2	12,725	5,495	3.0
China	24,567	16,619	4.5	10,103	6,397	3.5
Brazil	18,473	14,279	3.9	4,375	3,968	2.2
Switzerland	19,842	13,111	3.6	19,906	10,706	5.8
Sweden	16,286	12,929	3.5	11,525	6,514	3.5
Australia	22,173	11,784	3.2	8,982	4,576	2.5
All other	171,576	115,584	31.4	102,509	62,845	34.0

Source: Foreign Commerce and Navigation of the United States.

Imports

Separate statistics of imports are not available prior to 1934, imports of erasers being classified as "manufactures of rubber, n.s.p.f." Despite the fact that a separate classification was set up at the beginning of 1934, some of the imports have continued to be classified as "manufactures of rubber, n.s.p.f."

Imports separately recorded for 1934

The table below shows the imports separately recorded under the new classification for the first ten months of 1934, both at New York and at all ports. All but two small shipments were from Japan.

Table 5. - Rubber erasers: Imports separately recorded as rubber erasers, at the port of New York and at all ports, first ten months, 1934

	At New York		At all ports	
	Quantity	Value	Quantity	Value
	Pounds		Pounds	
January	11,775	$1,459	26,470	$2,336
February	7,250	490	7,250	490
March	9,511	716	10,645	794
April	10,128	1,046	16,220	1,494
May	5,036	994	14,329	1,695
June	13,228	1,382	16,828	1,672
July	21,315	1,857	31,967	2,881
August	32,250	2,819	38,895	3,344
September	34,679	2,454	40,177	2,911
Total - Jan.-Sept.	145,172	13,227	202,781	17,617
October	13,033	1,533	15,040	1,832
November	-	-	27,728	2,599

Source: Bureau of Foreign and Domestic Commerce.

Note: All imports from Japan, with exception of shipment from Germany of 710 pounds valued at $79, in August, and shipment of 15 pounds valued at $10 from Czechoslovakia, in October, both at New York.

Imports at New York amounted to 72 per cent in quantity and 75 per cent in value of all separately recorded imports into the United States during the first nine months of 1934. Detailed import statistics for the period show that a total of 29,993 pounds valued at $2,382 was entered through customs districts on the Pacific Coast. Shipments of 10,733 pounds valued at $644 were entered at Baltimore, and 8,995 pounds valued at $814 at New Orleans.

Import data obtained by invoice analysis

An invoice analysis was made in connection with this complaint of all erasers imported at New York and recorded under the classification of "manufactures of rubber, n.s.p.f." both in 1933 and in the first nine months of 1934. The results of this analysis are given in the following table. All imports were from Japan.

Table 6. - Rubber erasers: Data obtained by invoice analysis of all erasers imported at New York and recorded under the classification of "manufactures of rubber, n.s.p.f.", 1933 to September, 1934

Period	Quantity	Value	Quantity	Value
	Pounds		Gross	
1933				
January			11,881	$2,100
February	2,980	$70	2,920	634
March	1,606	77	8,165	1,550
April			6,559	1,652
May			1,935	802
June	2,418	118	1,720	697
July	720	65	6,075	1,994
August	2,890	231	5,690	1,625
September			10,615	3,180
October	295	16	3,691	1,172
November			8,145	2,754
December	515	196	14,520	4,731
Total	11,425	773	82,216	22,891
1934				
January			18,567	5,523
February			4,906	1,879
March			11,451	3,509
April			9,936	5,294
May			4,999	2,450
June	5,235	374	5,346	2,549
July			10,367	2,917
August			5,416	2,014
September	3,320	1,425	3,641	1,551
Total-Jan.-Sept.	8,555	1,799	74,629	27,491

Source: United States Tariff Commission.

Note: All imports from Japan.

Course of imports

The available statistics of imports of rubber erasers entered at ports other than New York are incomplete. However, imports at that port during the first nine months of 1934 amounted to over 70 per cent of total imports. In view of these facts, imports at New York have been taken as representative of total imports during 1933 and 1934.

The data presented in Tables 5 and 6 are shown in consolidated form in Table 7 below. These data were combined by the method of partially estimating the unit of quantity in pounds. The weighted average unit value of imports for 1933 invoiced in pounds was used as the basis for converting to pounds the imports invoiced in gross. For the various months of 1934, the monthly unit value of imports in pounds was used as the basis for converting to pounds imports invoiced in gross for those months.

Table 7 . -Rubber erasers: Total imports at New York, 1933 to September, 1934

Period	Quantity (partially estimated)	Value	Index of Quantity	Index of Value
1933				
January-March	86,693	$4,431	100.0	100.0
April-June	61,984	3,269	71.3	73.6
July-September	133,135	7,093	153.2	160.1
Total - 9 months	282,012	14,795	108.2	111.3
October-December	164,459	8,869	189.3	200.2
Total for year	446,471	23,664	128.5	133.5
1934				
January-March	147,227	13,591	169.4	306.7
April-June	119,765	13,889	137.8	313.4
July-September	170,005	15,037	195.6	339.4
Total - 9 months	436,997	42,517	167.6	319.8
January	56,079	6,997	193.6	473.8
February	35,040	2,369	121.0	160.4
March	56,111	4,225	193.7	286.0
April	61,377	6,340	211.9	429.2
May	17,447	3,444	60.2	233.4
June	40,941	4,105	141.4	277.9
July	54,805	4,774	189.2	323.2
August	55,293	4,833	190.9	327.2
September	59,907	5,430	206.8	367.6

Note: All imports from Japan, with exception of shipment from Germany of 710 pounds valued at $79 in August, 1934.

The Code of Fair Competition for the Rubber Manufacturing Industry became effective December 15, 1933. On the basis of the data shown in Table 7 it may be noted that imports of rubber erasers increased from 282,000 pounds in the first nine months of 1933 to 437,000 pounds in the corresponding months of 1934, and from $15,000 to about $43,000 in value representing increases of 55 per cent in quantity and 178 per cent in value. The increase in value was only partly on account of the rise in the unit value of imports.

Imports in Relation to Domestic Production

Inasmuch as imports at New York, amounting to over 70 per cent of total imports in 1934, have been taken as representative of total imports into the United States, the following table shows a comparison of the trend of these imports with domestic production of erasers for the year 1933 and through the first nine months of 1934.

Table 8. - Rubber erasers: Ratio of imports at New York to domestic production

Period	Domestic production		Total imports at New York (Partially estimated) 1/	Ratio of imports to production of	
	All grades	Grades most comparable with imports		All grades	Grades most comparable with imports
	Pounds			Per cent	
1933					
By quarters					
Jan.-Mar.	164,664	46,184	86,293	52.8	188.1
Apr.-June	203,336	39,294	61,984	30.6	157.8
July-Sept.	303,752	68,708	135,135	43.1	193.8
Total - 9 months	675,752	154,176	282,012	41.7	182.9
Oct.-Dec.	294,068	45,968	164,459	55.9	367.8
1934					
By quarters					
Jan.-Mar.	280,601	58,731	147,227	50.8	250.7
Apr.-June	329,342	74,194	119,765	36.4	161.4
July-Sept.	270,919	49,113	170,005	62.8	346.2
Total - 9 months	889,862	182,028	436,997	49.1	240.1
By months					
January	95,072	21,695	56,070	59.0	258.4
February	83,098	13,559	35,046	42.2	225.2
March	111,431	21,467	56,111	50.4	261.4
April	112,343	33,608	61,377	54.6	182.6
May	116,397	22,186	17,447	15.0	78.6
June	100,602	18,400	40,941	40.7	222.5
July	88,454	10,320	54,805	62.0	531.1
August	93,431	16,164	55,293	59.2	342.1
September	89,034	22,629	59,907	67.3	264.7

Note: Production data for one producer are not included in this table

1/ See Table 7 and accompanying textual comment.

From data shown in Table 8, it may be noted that the ratio of imports to domestic production of all grades of erasers increased from 42 per cent during the first nine months of 1933 to 49 per cent for the corresponding months of 1934; a similar comparison shows an increase from 183 to 240 per cent in the ratio of imports to that part of domestic production reported to be comparable with imports. Furthermore, a comparison of data for the third quarter of 1933, just prior to the period when the code became effective, with the corresponding quarter of 1934, under the code, shows increases of from 43 to 63 per cent and from 194 to 346 per cent, respectively, in the two ratios.

Important Competitive Factors

Comparability of imported and domestic erasers

Erasers imported in largest quantities are the double-beveled type. This type is also produced in greatest volume by the domestic industry. Among the standard grades of double-beveled erasers, the imported erasers are similar in general appearance and shape to domestic erasers.

Unlike any of the customary domestic types, some of the imports are novelty erasers which might well be classed as toys since they are shaped like animals, pencils, watches blocks, etc. They are sometimes sold in sets or groups wrapped together in cellophane. There is some question whether these novelty erasers are strictly comparable with standard domestic erasers which form the bulk of the "school line." The novelty character of the imported erasers, however, is said to be a substantial competitive feature.

Channels of trade

Imported rubber erasers have only affected to an appreciable extent the production of domestic erasers going into the "school line", the imported erasers being sold at retail throughout the country to children and for children's use by syndicate or chain 5-and10-cent stores, and small corner stores. Because of their alleged inferior erasing qualities and a prejudice against Japanese products in general, imported erasers have been purchased hardly at all by commercial stationers and large industrial consumers.

For many years domestic erasers have been sold in the United States, along with other stationers' supplies, to wholesale stationers, jobbers, and direct to large retailers. It is stated that the syndicate stores refused to handle imported erasers when they first appeared on the market in 1932, but because jobbers and small retail stores began purchasing and selling these erasers at lower prices, the syndicate stores were forced to handle them.

Domestic prices

(a) Range of domestic prices. - Domestic net wholesale selling prices of erasers with which imports are said to be most competitive, roughly speaking, range from between 42 cents and 90 cents per pound.

The prices of some domestic erasers are higher than 90 cents a pound, but there is doubt whether these erasers enter into competition with Japanese imports. The net wholesale selling prices of one manufacturer, who claims that 33 out of 46 kinds of erasers produced have been affected by imports and that all erasers produced are comparable with imports, average about 55 cents per pound.

(b) Stability of domestic prices. - The weighted average of wholesale selling prices reported by seven domestic manufacturers declined less than 5 per cent from 1929 to 1932. It rose slightly in the second half of 1932 and remained through 1933 and the first nine months of 1934 at a level approximately 3 per cent under 1929. In comparison, the average unit value of exports declined approximately 15 per cent from 1929 to the second half of 1932 and remained substantially at that level during 1933 and 1934. It appears, therefore, that domestic wholesale selling prices were not reduced to any important extent as a result of increasing competition from imports. The greater decline in export prices doubtlessly reflects more severe competition in foreign markets during recent years.

In contrast to the relative stability of wholesale prices of rubber erasers in the domestic market, total domestic production declined roughly 40 per cent from 1929 to 1932 and 1933.

The following table shows the trend of weighted wholesale prices, the unit value of exports and domestic production of rubber erasers in 1929 and from 1931 to September, 1934.

Table 9. -Domestic rubber erasers: Trends of weighted wholesale selling prices, average unit export values, and production, 1929, 1931 to September, 1934

Period	Weighted wholesale selling prices 1/	Average unit export value	Production: All erasers	Production: Erasers most comparable with imports
		1929 = 100		
1929	100.0	100.0	100.0	100.0
1931	2/	93.7	76.5	72.1
1932	96.7	91.4	53.3	53.9
January-June	96.7	96.1	51.7	49.4
July-December	3/ 97.1	87.3	55.0	58.5
1933	97.1	85.7	63.7	50.4
1934 - 9 months	97.2	86.5	78.0	72.0

Source: Complaint and Foreign Commerce and Navigation of the United States.

Note: The indices in this table are based upon the selling prices of domestic erasers produced in large quantities and reported to be comparable with imports.

1/ Weighted according to value of production for each producer in the years 1929, 1931, and 1933.
2/ Not available.
3/ July, 1933.

Average unit values of imports and exchange rates

On the basis of the available data covering imported erasers recorded in pounds, the average dutiable value of erasers imported from Japan increased from $0.053 per pound in 1933 to an average of $0.0869 per pound for the first nine months of 1934. The averages during 1934 were $0.1026 for the second quarter, $0.0821 for the third quarter $0.1212 for the month of October, and $0.0937 for November. In general, these data indicate that the unit value of imports increased from 1933 to 1934 by more than the amount of the rise in the value of the yen in terms of dollars, which was 43 per cent from the first quarter of 1933 to the third quarter of 1934.

Effect of National Recovery Program

Production costs

The following table shows the various items of cost per 100 pounds of rubber erasers for six producers for the first half of 1933 contrasted with corresponding costs for a representative period under the code.

Table 10. - Rubber erasers: Costs of production of six producers for the first half of 1933 and for a representative period under the code

Item of cost	Costs per 100 pounds of erasers: Weighted average cost first half of 1933 1/	Weighted average cost for period under code 2/	Increase ( ) or decrease (-) over first half of 1933	Ratio to total costs: First half of 1933	Ratio to total costs: Period under code
			Per cent	Per Cent	
Material	$10.67	$14.54	36.4	22.5	29.4
Labor	10.33	11.16	8.1	21.7	22.5
Factor expense (except depreciation)	6.81	7.58	11.2	14.3	15.3
Depreciation	1.78	2.15	20.4	3.7	4.3
General and administrative expense	8.18	6.45	21.1	17.2	13.0
Selling expense	9.74	7.69	21.1	20.5	15.5
Total	47.50	49.57	4.4	100.0	100.0

Source : Complaint.

From data in the above table, which is based on information submitted by the complainant companies, it may be seen that the cost of material was 36 per cent higher under the code than for the first half of 1933; depreciation was 20 per cent higher, factory expense 11 per cent higher and labor cost 8 per cent higher. These increases were largely offset, however , by a decline of 21 per cent in the items of general and administrative expense and of selling expense, respectively, leaving a net increase in total costs of only 4.4 per cent.

1/ Ratio of all erasers produced by each manufacturer to total production of erasers in 1933 used in weighting costs.

2/ Ratio of all erasers produced by each manufacturer to total production for the first nine months of 1934 used in weighting costs.

Labor

A basic minimum hourly wage of 35 cents, applicable to the Stationers' Rubber Goods Subdivision, is provided by the code for the Rubber Manifacturing Industry. There is likewise provided minimum weekly wages ranging from $15 for workers in cities having over 500,000 population, or in the immediate trade area of such a city, down to $12 per week for wage earners in towns of less than 2,500 population. A 40-hour week and an 8 hour day are established by the code, although each employee may be permitted to work a total of 80 hours per year in excess of the maximum hours specified but not more than 48 hours in any one week.

In 1929, wage earners in the rubber eraser industry were paid an average hourly wage of about $0.54, and an average weekly wage of about $24. The industry during 1933 and the first seven months of 1934 maintained average hourly wages between approximately $0.49 and $0.56, or between roughly 40 to 60 per cent above the basic minimum hourly wage of $0.35 established for the entire rubber manufacturing industry by the code.

The average weekly wage maintained in the rubber eraser industry during 1933 ranged from $15.50 to $20.62, or roughly between 3 and 37 per cent above the highest minimum weekly wage established for the rubber manufacturing industry.

In 1929, the work averaged approximately 45 hours. The average work week during 1933 ranged from 28 to 36 hours. During the first seven months of 1934, after adoption of the code, the average weekly work period was roughly 38 hours.

The following table shows the trends of employment, payroll, and wages for the rubber eraser industry in the first half of 1933, before the code, and for the first seven months of 1934, after the code became effective.

Table 11. - Rubber erasers: Indices of employment, payroll, and wages, 1933 and 1934

Period (week ending 15th of month)	Number of employees	Hours per worker per week	Man hours per payroll period	Total weekly payroll	Average weekly wage	Average hourly wage
	Jan. 1933 = 100					
1933						
January	100.0	100.0	100.0	100.0	100.0	100.0
April	104.9	92.0	96.6	100.1	95.4	103.5
July	109.7	135.9	147.0	139.3	127.0	94.8
October	125.0	118.9	148.8	150.1	120.1	100.7
Code ----------Approved December 15 ----------						
1934						
January	116.0	127.2	147.5	135.0	116.4	91.5
April	129.2	129.6	167.4	161.2	124.8	96.3
July	155.7	125.9	172.9	187.3	121.7	96.7

Source : Complaint.

The indices of the above table show that the number of wage earners engaged in producing rubber erasers was 56 per cent greater in July, 1934, than in January, 1933; the average work week was 26 percent greater, the weekly wage 22 per cent greater, and the hourly wage rate 3.3 per cent.less.

SALT CAKE (Sodium Sulphate) (No. 46)

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SURVEY OF INFORMATION ON SALT CAKE (Sodium Sulphate Crude) May 1935

Subject of Complaint and Status of Complainants Under the National Industrial Recovery Act.

This is a report arising out of a complaint under Section 3 (e) of the National Industrial Recovery Act with respect to imports of salt cake (sodium sulphate crude), filed by the producers who manufacture salt cake as a primary objective. Barring one exception they produce salt cake from natural deposits of brine and thenardite ore and mirabilite.

The complainants operate under the Code of the Chemical Manufacturing Industry approved by the President February 10, 1934. Four of these complaining companies have made it their primary objective to produce crude sodium sulphate for sale in commercial form. The other complainant is affected less directly since it does not actually produce, but leases its properties on a royalty basis to another producing company not a party to the complaint. Chemical companies producing salt cake but not as a primary product are not parties to the complaint.

Tariff Treatment

Salt cake (crude sodium sulphate) is imported into the United States free of duty. In the Tariff Act of 1930 it falls under Paragraph 1766, Sodium * * * sulphate, sulphate crude or crude salt cake * * *. Comparison of tariff rates since 1913 reveals that salt cake has long been on the free list, thus:

1930	Paragraph 1766	Free
1922	1667	"
1913	605	"

In its refined form as glauber's salt (hydrated sodium sulphate) it falls under Paragraph 81 of the Tariff Act of 1930 and is dutiable at $1.00 per ton, or as dehydrated glauber's salt (anhydrous sodium sulphate) it is dutiable under the same paragraph at $3.00 per ton. The difference between the two rates on the refined forms is compensatory, as conversion of glauber's salt costs approximately $2.00 per ton.

American producers of natural sodium sulphate, in March, 1932, protested the free entry of sodium sulphate crude, and asked for a proper classification which would place it in the category of anhydrous sodium sulphate. "Crude", it was maintained, meant in the natural state, and the foreign product was manufactured and, therefore, should be held dutiable. The Treasury Department declared that the foreign product was indentical in use with natural crude sodium sulphate, and adopted the definition of anhydrous sodium sulphate" as a pure grade sold for special uses, sometimes salled anhydrous glauber's salt and usually made by separating it from its concentrated form (T.D. 45856).

On a supplementary complaint sodium sulphate crude was held not dutiable as an earthy or mineral substance under Paragraph 214, or as an unenumerated manufactured article under Paragraph 1588, nor was it dutiable under Paragraph 81 or Paragraph 214 by reason of the similitude clause in Paragraph 1589 of the Tariff Act of 1930 (T.D. 46005). The liquidation of entries of salt cake was suspended pending judicial determination of the Treasury Department's classification (T.D. 46150). A protest filed under Section 516 (b) against liquidation under Paragraph 1766 was abandoned and T.D. 46150 was revoked (T.D. 46323). An anti-dumping complaint is again before the Bureau of Customs undergoing investigation at the time this survey is being made.

The Domestic Industry

Nature of product

Sodium sulphate is a chemical which occurs in commerce in three forms:

anhydrous sodium sulphate or refined salt cake, appearing as white amorphous powder containing no water of crystallization;

Glauber's salt or refined salt cake, appearing as a crystalline solid containing 55 per cent of water of crystallization; and

salt cake, the crude form of anhydrous sodium sulphate available in powder or more typically in lumps containing 92 to 99 per cent sodium sulphate..

Ordinarily, commercial salt cake, or sodium sulphate crude, varies in color from yellowish to greenish white, occassionally pure white. A dirty gray color is indicative of sodium chloride contamination, that is, incomplete decomposition. In general, the finer the grain of salt cake the higher the grade.

Uses of the product

Sodium sulphate has numerous uses. It is a source of soda in the sulphate process used in making sulphate pulp for kraft paper manufacture. It is also an important ingredient in glass and soap-making, and in artificial refrigeration. The textile industry finds it useful as a bleaching agent for fabrics and as a mordant in cotton dyeing. It is also used as a diluent in the manufacture of synthetic dyestuffs. In construction work it is an ingredient of hydraulic cement. Pigment making uses it to promote crystallization. It is also valuable in metallurgical processes, in photography, in tree surgery, and for pharmaceutical purposes as Glauber's salt.

The crude salt cake is most extensively used, however, in the manufacture of sulphate pulp for kraft paper. Kraft paper has been so much in demand in recent years that the tonnage of sulphate pulp used in its manufacture increased from 120,378 short tons in 1929, to the high figure of 1,259,000 short tons in 1933. Large quantities of sulphate pulp are also imported free of duty. It has been estimated that over 50 per cent of the salt cake or crude sodium sulphate produced for sale in this country is used by the producers of sulphate pulp who

require about one ton of salt cake to produce five tons of pulp. In 1927 it was estimated that the domestic consumption of sodium sulphate in all forms was as follows:

Industry	Short tons	Type of sodium sulphate used
Pulp and paper	103,000	crude
Heavy chemicals	97,000	"
Rayon and textiles	92,000	crude and refined
Glass and ceramics	45,000	" " "
Dye and coal tar	20,000	" " "
Soap	2,000	" " "
Fine chemicals	1,000	crude
All other	15,000	crude and refined
Total comsumption	375,000	

Methods of production

Salt cake is obtained by chemical manufacture or from natural sources such as brine lakes or deposits in the form of the minerals, thenardite or anhydrous sodium sulphate and mirabilite, the hydrated form containing water.

Chemically it is derived from the manufacture of hydrochloric acid which is made by several chemical processes. It may be produced by the reaction of common salt (sodium chloride) with niter cake (sodium bisulphate); by the reaction of common salt with sulphuric acid; or by the reaction of common salt with sulphur dioxide.

Production by the first process is of declining importance. This is due to the fact that niter cake is much less plentiful than formerly. The introduction of new methods of producing nitric acid, in the production of which niter cake was formerly a residual product, is responsible for the decline.

The most widely used process is by treating common salt with sulphuric acid from which is derived hydrochloric acid and salt cake, The apparatus long used was the pot and muffle furnace, but it is said that it is being rapidly displaced by the Mannheim furnace, which operates mechanically.

The other process, known as the hargreaves process, which yields salt cake and hydrochloric acid from the reaction of common salt and sulphur dioxide, has been used extensively in Europe and is used in this country by one company in Louisiana.

The chemical output of salt cake has dimished considerably due to changes in methods of acid manufacture. Hydrochloric acid is now being produced as a by-product of the chlorination of organic materials, chiefly of coal tar origin. Synthetic processes based upon direct combination of elementary hydrogen and chlorine from electrolytic cells has been adopted also. When such methods are used salt cake is not produced.

The natural sodium sulphate is present in great quantities in the United States, but unfortunately in remote section of the country. Usually it is to be found in arid regions - in the great closed basins where rainfall is deficient and streams have no outlet to the ocean. In a few places sodium sulphate minerals are present in dry beds of mineable thickness, mixed with other salts and mud. Typical occurrences are in "playas" which are dry or marchy bootoms of more or less dried up salt lakes, ranging in size from small cloughs with a scanty incrustation of salts on the surface of the mud, to thick beds several miles in extent, In such deposits sodium sulphate frequently mixed with other soluble salts may occur.: (1) in solution as a brine in varying degrees of saturation: (2) in intermittent crystal layers, or (3) as a permanent bed protected from solution in wet weather by a covering of mud.

Large deposits are known to exist in Arizona, Nevada, Texas, Utah, California, North Dakota, Washington, and Wyoming. The methods of extraction very considerably. Thus, in the Verde River section in Yapavai County, Arizona, a flat-lying bed of thenardite ore about 3½ feet thick is worked underground through tunnels. The ore is drilled with machines, loaded into cars, and carried to a near-by plant for processing. The contaminating clay and sodium chloride are removed by a fine-mesh cylindrical screen, equipped with sprays and employing a saturated sodium sulphate solution instaed of water. A drum dryer removes moisture and rolls are employed to crush the sulphate to the desired size. A typical analysis reveals a product containing about 95 to 96 per cent sodium sulphate content.

In the Rhodes marsh region of Nevada, sodium sulphate is also mined from thenardite ore. In this region the area to be mined is stripped of the overburden or top soil by means of gasoline shovels to get at the underlying mineral vein. Frequently it is necessary to pump out the eater which has collected in the stripped areas before the blasting of the thenardite ores takes place. After blasting the ore is loaded into conveyers and transported to the plant. There it is crushed and washed. It is then dehydrated, classified, and given a final washing. Once more it is dried and then crushed to size and made ready for shipment. Chemical analysis shows a high degree of purity from this deposit, the sodium sulphate content running 97 per cent or better. The balance is sodium chloride, calcium sulphate, insolubles, and moisture.

Still another method of production is employed by a Texas producer. Brine is pumped from a lake and the sodium sulphate is obtained from solar evaporation or by means of a chilling process. The latter is used when the weather conditions require artificial refrigeration to precipitate the sodium sulphate.

Organization of the industry

A final tabulation of data collected by the Bureau of the Census reveals that in 1933 there were 30 establishments producing salt cake (sodium sulphate), and other chemicals, which is seven more than in 1931.

Five are located in New Jersey, 4 in Illinois, 3 in Pennsylvania, 3 in Ohio, 4 in California, 2 in Texas, 1 each in Connecticut, Delaware, Mass Massachusetts, New York, Indiana, Michigan, Louisiana, Maryland, and Tennessee. It is interesting to note that most of the chemical establishments are located in the Eastern United States and the Middle West. This is a matter of considerable significance, since transportation rates tend to confine the sale of domestic salt cake to market areas of limited range.

According to the United States Tariff Commission the bulk of salt cake chemically produced is made by less than 10 large companies manufacturing a general line of heavy chemicals.

In Louisiana one company - included in official statistics in the Census with the other chemical producers - maintains that it produces salt cake as a primary objective rather than as a minor product. This company is a party to this complaint, whereas the other chemical producers are not.

It has been reported also that a company in California in 1934 planned to produce sodium sulphate as a by-product from potash and borax. The brine in the Searles Lake region was to be used as raw material. According to the Bureau of Mines this company actually entered production in 1934, but its production statistics are not available.

The number of companies producing salt cake as a primary objective are few and widely scattered. In the case of the five complainants, one has its plant in Texas; one in Louisiana; one in Nevada; and one has a plant under construction in Utah. The fifth leases its properties in Arizona on a royalty basis to a company which is controlled by a large chemical concern which imports salt cake.

The properties of three of these complainants, when in operation, are devoted to the exploitation of natural salt cake deposits; those of another will produce from natural sources when production is started; the fifth complainant produces salt cake chemically in conjunction with hydrochloric acid by the Hargreaves process.

The number of companies actually producing natural crude salt cake varies from year to year and from available information it appears that in no one year recently have more than four or five companies been in actual operation.

The complainant company making salt cake by chemical process is a subsidiary of a salt company in Louisiana. Three complainant companies producing or about to produce salt cake from natural sources, appear to be independent organizations. The remaining complainant has its properties under lease to a company controlled by a large chemical company as already indicated.

These primary producer organizations are not large. Available statistics reveal that they have had on their combined payrolls from 51 to 148 men at various times in recent years. It would be conservative to state that the producers of sodium sulphate as a primary objective probably never had more than 200 employees on their combined payrolls at any one time.

Conditions of production and marketing

Despite the developments of new methods in the manufacture of heavy acids wherein salt cake or its derivative, niter cake, is no longer produced jointly with acids, it nevertheless remains true that a very large share of the sodium sulphate produced in this country is the chemical type. This supply of salt cake, therefore, varies with demand for hydrochloric acid. A brisk demand for acid means a larger supply of salt cake, regardless of the demand for the latter at the prevailing prices. A lag in demand for acid means a lessenes supplu of salt cake. Unfortunately, chemical companies cannot produce sodium sulphate only, by permitting the acid gases to escape uncollected, due to the excessive amount of damage which the gases inflict on the surrounding countryside. Hence, the acid must be collected whenever salt cake is made. The high cost of storage of acid is a factor in determining how much acid will be produced. Comsequently, from this source of production salt cake is subject to the varying demand for hydrochloris acid.

Insofar as salt cake is a minor product of the chemical industry it might be sold even at a loss without serious injury, perhaps, to the large chemical companies which produce many products. Under such conditions it would appear that unless there were an absolute scarcity of chemical salt cake the market areas served by the chemical companies could be denied the producers of natural sodium sulphate in most instances. This is likely to be the case in the Northeastern and Middle Atlantic States and that section of the country bounded on the West by the Mississippi River and on the South by the Ohio, where chemical companies producing salt cake are most numerous. The transport costs of getting the natural salt cake from the remote regions in which it is mined, has ever been a handicap to the natural industry and is still very much of a limiting factor on the activities of the natural sodium sulphate producers.

Statistics of domestic production

Table 1 presents by census years the chemical production of salt cake, It may be observed that since 1927 the trend of yearly output has been downward. This is attributable largely to technological changes in the production of heavy chemicals.

Table 1. Salt cake (sodium sulphate, crude): Domestic chemical production, census years 1923 - 1933

Year	Number of establishments	Total production	Made and consumed by producer	Production for sale	Value of product sold	Value per short ton
		Short tons				
1923	34	187,064	46,047	141,017	$2,973,013	$21.08
1925	38	189,293	48,450	140,843	2,339,002	18.61
1927	34	208,565	33,573	174,992	2,786,818	15.93
1929	28	206,612	36,436	170,176	2,014,838	11.84
1931	23	119,399	20,672	98,727	1,528,032	15.48
1933	30	143,148	28,538	114,610	1,471,278	12.84

Source: Basic data, Census of Manufactures.

Table 2 presents the Bureau of Mines figures of the production of natural salt cake since 1924. Considerable variation in production has been present from 1924 to 1929. In 1930 natural production reached a new high level and maintained it in 1931 and 1932. In 1933 natural production was again noticeably increased, but dropped precipitously in 1934, declining 64 per cent.

The trend of unit values has been downward up to 1934 when they advanced sharply. It is believed that this advance is attributable to the influence of the production of one producer, who by virtue of a somewhat more strategic location in relation to the market than the other producers is able to produce and sell at mill prices somewhat higher than those producers more remotely located.

Table 2. Salt cake (sodium sulphate, crude), natural: Domestic production, 1924-1934 1/

Statistical	Production	Value	Unit value
	Short tons		
1924	16,148	$174,600	$10.81
1925	9,909	84,380	8.52
1926	19,557	165,800	8.53
1927	28,006	168,882	7.34
1928	6,559	42,485	6.48
1929	7,540	41,199	5.46
1930	32,630	206,323	6.32
1931	32,510	198,132	6.09
1932	32,204	210,342	6.53
1933	46,539	245,240	5.27
1934	16,650	148,225	8.90

Source: Bureau of Mines and U. S. Tariff Commission.

1/ Includes small amounts of Glauber salt.

Table 3 classified domestic production by census years 1925 to 1933. Up to 1930, barring 1927, natural salt cake production has been a negligible part of total sodium sulphate production. In recent years it has become a more important factor in the market, due to the fact that chemical production has been decreasing, while natural production has increased. In terms of a ratio of value product, the natural product has also increased, but not as noticeably as in the case of production ratios. This is due to the fact that the unit value of the natural product runs considerably lower than the unit value of chemical product.

Table 3. Salt cake (sodium sulphate, crude): Domestic production from natural and chemical sources, census years, 1925 - 1933

Census year	Production			Ratio of natural production to total production	Production for sale			Ratio of natural production for sale to total production for sale	Value of production for sale			Ratio of value of natural product to total sold
	Natural	Chemical	Total		Natural	Chemical	Total		Natural	Chemical	Total	
	Thousand short tons			Percent	Thousand short tons			Percent	Thousand dollars			Percent
1925	9.9	189.3	199.2	5.0	9.9	140.8	150.7	6.6	84	2,339	2,423	3.5
1927	23.0	208.6	231.6	9.9	23.0	175.0	198.0	11.6	169	2,787	2,956	5.7
1929	7.5	205.6	214.1	3.5	7.5	170.2	177.7	4.2	41	2,015	2,056	2.0
1931	32.5	119.4	151.9	21.4	32.5	98.7	131.2	24.8	198	1,528	1,726	11.5
1933	46.5	143.1	169.6	24.5	46.5	114.6	161.1	28.9	245	1,471	1,716	14.3

SOURCE: Basic data: Bureau of Census and Bureau of Mines.

Table 4 presents the production figures of the complainant parties. Those producers are classified herein as primary producers, that is, those whose primary objective is the production of salt cake, and include several natural producers and a chemical producer.

Table 4. Salt cake (sodium sulphate, crude): Complainants' production, 1929 - 1934

Statistical period	Production
	Short tons
1929	15,536
1931	17,340
1932	24,049
1933	33,248
1934	26,336 1/

Source: Complaint, Exhibit F.

1/ 9596 tons from natural sources.

The production of the complainants has increased steadily from 1929 to 1933, the peak year. In 1934, however, their production was about 80 percent of what it was in 1933. The fact that one complainant company producing salt cake from natural sources closed its plant in 1934 accounts largely for the decline in the complainants' output. As reference to Table 2 will show, natural producers, including the complainant natural producers, appear to have suffered heavily in 1934 as compared with previous years, unless 1933 production was abnormally large by reason of stock accumulation in accumulation in anticipation of increasing production costs.

Table 5, derived from official data, presents a readjustment of data necessitated by distinguishing producers whose primary objective is salt cake production and producers who make salt cake as a minor chemical product.

Total production of salt cake for sale decreased sharply in 1931 compared with 1929 due to the great decline in non-primary chemical production, despite the noteworthy increase in primary production. Both non-primary chemical and primary production increased in 1933, with primary producers representing about 40 percent of the total production for sale. However, in 1934 the primary production declined drastically, the plants of several natural producers being closed.

The complainants represented about 52 percent of the primary production in 1933 and about 79 percent in 1934. In 1933 they represented about 21 percent of total production for sale.

Table 5. Salt cake (sodium sulphate, crude): Total production for sale, non-primary chemical, primary, and complainants' production, and percentage participation of each class in the total production for sale, 1929 - 1934

Year	Production for sale			Percent of total production for sale		Complainants'	
	Total	Non-primary chemical	Primary	Non-primary chemical	Primary	Production	Percent of total production for sale
		Sht. tons				Sht. tons	
1929	177,716	154,640	23,075	87.0	13.0	15,536	8.7
1931	131,237	81,387	49,850	62.0	38.0	17,340	13.2
1933	161,149	96,898	64,251	60.1	39.9	33,248	20.6
1934	-	1/	33,390	-	-	26,336	-

Source: Derived from official data and complainants' production figures.

1/ Not available

Exports

Prior to 1929 exports of sodium sulphate were not separately recorded. Since then, the figures shown are for both crude and refined sodium sulphate and are not comparable with statistics of production and imports. Exports have gone mostly to Canada, with lesser amounts to Japan. Since 1933, sodium sulphate has not been separately classified, but it is known that exports in recent years have been negligible. Table 6 shows the exports from 1929 to 1932.

Table 6. Salt cake (sodium sulphate, crude and refined): Exports, 1929 - 1932 1/

Year	Pounds	Short tons	Value	Value per short ton
1929	3,331,630	1,666	$53,176	$31.92
1930	8,872,462	4,436	113,253	25.53
1931	9,304,887	4,652	75,784	16.29
1932	2,870,061	1,435	24,155	16.83

Source: Foreign Commerce and Navigation.

1/ Sodium sulphate not separately classified prior to 1929 nor after 1932. From 1929 to 1932 both crude and refined are shown together, hence they are neither comparable with domestic production nor with imports.

Competition with the European cartel is not conducive to any great development of an export trade in sodium sulphate by the United States. Moreover, Canada, which has been our best customer, has large natural deposits, particularly in Saskatchewan, and is protected now by a high tariff - $12.00 per short ton - and a special excise tax of 3 percent applicable only to imported goods on their duty-paid value. A six percent sales tax is imposed also on all salt cake sold in Canada and on imported salt cake the tax is figured on the duty-paid value.

The Industry in Foreign Countries

Sodium sulphate is produced in many countries as a natural product from ore and brine and as a more or less minor product of the chemical industry. Natural deposits of considerable size and of increasing importance are found in Canada, Russia, and Chile. Chemical production is found in the leading European industrial countries, notably in Germany.

No attempt will be made to describe the industry as it exists in all foreign countries. However, since Canada has assumed importance in recent years as a producer of natural sodium sulphate and since Germany has long been the dominating factor in world markets through the cartel, attention will be directed to the industry in these two countries.

Canada

The production of Sodium sulphate in Canada prior to 1920 was negligible. The domestic shortage of potash so noticeable during the World War led to an extensive search in Saskatchewan and Alberta. Many deposits of sodium sulphate in the form of mirabilite were uncovered. Exploitation of these natural resources started in a small way to serve the needs of the pulp industry and the smelting of nickel-copper ores and

in very recent years production figures in Canada have built up rapidly. Canada has placed herself on a selfsustaining basis and is able to export salt cake, some of which has entered the United States. In 1933, the Canadian output of salt cake was valued at $485,416. Preliminary figures for the first six months of 1934 show a production of 27,689 short tons valued at 209,409.

Plants have been installed at Lakes Muskiki, Frederick, Fusilier, Sybout, White Shore, Horseshoe, and Alsask, and consular reports indicate considerable productive activity.

In Canada, three methods of production have been employed. According to the nature of the deposit and other factors it has been possible (1) to mine the bed; (2) to fish crystals out of the brins; or (3) to evaporate the brine. In the late summer, brine in deposits become sufficiently concentrated so that intermittent beds of crystals can be harvested by means of steam shovels. In the fishing operations the crystals are loaded into scows that are floated over the deposits. This method is slow, but has the advantage of yielding almost pure crystals needing little further treatment. However, any method dependent upon intermittent crystals is naturally limited to a short harvesting season of only a few months at most each year. On the other hand, methods dependent upon permanent beds or evaporation of brine involve chemical processes of purification to eliminate soluble as well as insoluble impurities.

As in the case of natural product production in the United States, production in Canada suffers through uneconomic location in terms of markets and long hauls of the product are necessary. The nearest market to the Saskatchewan production regions is probably to be found in Minnesota and Wisconsin, among the sulphate pulp mills.

Germany

The German production of sodium sulphate and niter cake (acid sodium sulphate) has been estimated as high as 350,000 tons annually. The Kaiseroda Works alone have an annual capacity of 120,000 tons and the I. G. Farbenindustrie plants in 1928 were credited with the capacity to make 80,000 tons annually, and to these may be added the output of several smaller producers.

In Germany, one method of production is from magnesium sulphate liquor, a residue from the process of making fertilizer potash. Formerly this liquor was dumped into the rivers as a waste product. Its commercial possibilities were discovered, however, and there followed conversion of magnesium sulphate to sodium sulphate by adding common salt (sodium chloride) to the magnesium sulphate at suitable temperatures. This chemically manufactured product is generally superior to that derived from acid production since it contains practically no free acid, so that in purity it approaches annyrdous sodium sulphate, the refined salt cake. About one-half of the total German production is from this method. The balance is produced in conjunction with hydrochloric acid.

These synthetic processes have made Germany a leading producer, and it has been the dominant factor in international trade in salt cake

through the cartel (Sulfat Vereinigung) which has its headquarters at Frankfort-on-Main. Other European industrial countries, notably Great Britain, France, and Belgium, with exportable surpluses, have frequently pooled their interests with Germany to the extent of allocating markets and even operating through a joint sales organization in the form of an international cartel.

The Sulfat Vereinigung, hereinafter called the Sulphate Union, was organized in 1926, with one of its objectives the elimination of intermediaries in the distribution of salt cake. Selling conditions were unsatisfactory to the industry (largely because of the operations of the so-called "Coffee House" brokers and curb merchants), and it desired to exercise a greater degree of control over prices and markets, particularly with respect to prices paid by ultimate consumers. The Union desired to deal only with buyers known to use the merchandise in their own establishments and under the present operation of the Union strict control is exercised. The Sulphate Union is a limited liability company which was organized to handle the export sales of the principal German producers of sodium sulphate. It concerns itself only with the so-called "technical crude salt cake," the purity of which runs from 95 per cent to about 98 per cent. The Sulphate Union is the sole exporter of crude salt cake produced by its members in Germany, and individual producers who belong to the Union are not permitted to export crude salt cake on an independent basis.

The Sulphate Union is also said to be under contract with one or two small producers not actually members of the Union. One or two minor concerns in Germany are said to work in competition with the Union.

While the Sulphate Union is an export organization, it also exercises some control over German inland business, in that each individual producer of salt cake, the selling independently, must file copies of contracts and invoices with the Union.

The Sulphate Union is a part of the European Salt Cake Cartel, known as the "European Salt Cake Association," which has its headquarters in London. This is the key organization for the following affiliates:

(1) The Salt Cake Association of London.
(2) The Sulphate Union of Frankfort.
(3) Belgian interests.
(4) French interests.

The French and Belgian interests, which are relatively small, are represented by secretariats and are bound by agreement not to sell to the United States or Scandinavian countries, which are the principal users of salt cake, except through the Sulphate Union. The British interests sell largely to the Scandinavian countries, while all contracts for the United States are made by the Sulphate Union of Germany.

Under the terms of the European Salt Cake Association's agreement the Sulphate Union is obliged to allot a given amount of business to the Belgian producers, also to the French, and sometimes to Dutch interests. Thus, shipments for the United States might at times consist entirely of German or of Belgian goods, and sometimes of mixed shipments from both countries.

Except where special qualities are specified, such as Kaiseroda from Germany, the Sulphate Union allots deliveries on export orders to German and Belgian producers on a quota basis. Kaiseroda quality, which comes from natural mineral deposits yielding magnesium sulphate, is considered a somewhat better quality than the crude salt cake which is produced in conjunction with the manufacture of hydrochloric acid.

The Sulphate Union is represented in the United States by three firms, each of which is said to have its own distributing area. Two of these firms are under agency contracts, working on a commission basis, and the other is a sales agency, buying at a discount and reselling.

The only relationship between the Sulphate Union and the ultimate buyer in the United States is that of buyer and seller. The Union exercises no control over the resale price in the United States, but in its contracts requires assurance that buyers are purchasing the salt cake for their own use. It is said that there is no community of financial interest between the Union and its customers in the United States.

Prices quoted by the Sulphate Union have been c.i.f. American ports until recently, when some customers in the United States requested a change to f.o.b. European port, such as Hamburg, Antwerp, etc.

Payments to the Sulphate Union are made in dollar amounts to the Union's American agents, who in turn remit through dollar drafts, after deducting the amount of the agents' commission.

In the case of payments for Belgian merchandise, the Sulphate Union's American agent in New York remits to the European Salt Cake Association in London, which is instructed by the Sulphate Union in regard to the distribution of the remittance to the various participants in the shipment, including the Sulphate Union.

The fact that Germany produces much of its salt cake as a by-product, and because salt and magnesium sulphate from potash refining are abundantly available and very cheap in Germany, together with the fact that the control of all sales abroad is in the hands of the Sulphate Union, which in turn is a dominant factor in the European Cartel, make German producers very keen competitors in any market.

Imports

Annual imports of salt cake from 1922 to 1934 are shown in Table 7. Prior to 1928 the amounts imported were negligible, the domestic demand being amply cared for by the chemical industry producing crude sodium sulphate. However, the phenomenal growth of the sulphate pulp industry because of the increasing popularity of kraft paper, the fact that chemical production of salt cake depends on the demand for hydro-chloric acid and nitric acid and not on the demand for salt cake, together with technological changes in the production of acids wherein salt cake is no longer produced, and the then very small amounts of sodium sulphate produced from natural sources, made the American market peculiarly dependent upon imports to meet the increasing demand for salt cake. This relative scarcity encouraged imports and accounts in part for their rapid increase since 1927. At the same time they encouraged greater production of salt cake domestically from natural resources.

Table 7. Salt cake (sodium sulphate, crude): Imports for consumption, 1922-1934

Statistical period	Quantity (short tons)	Value (dollars)	Value per short ton
1922	715	$ 8,537	$ 11.94
1923	5,283	84,051	15.91
1924	3,427	40,582	11.84
1925	1,913	18,176	9.50
1926	6,270	66,321	10.58
1927	11,172	100,279	8.08
1928	28,227	253,553	8.98
1929	91,634	829,793	9.06
1930	70,385	800,432	11.38
1931	72,747	803,509	11.05
1932	61,124	644,074	10.54
1933	99,309	885,306	8.92
1934	89,701	799,141	8.91

Source: U. S. Tariff Commission.

The chief sources of imported sodium sulphate are revealed in Table 8. It may be observed that Germany has ranked high as an exporter to the United States in every year since 1929. In 1934, Germany's contribution was particularly large, representing 70 per cent of the imports for that year. The proportion contributed by Canada was 26.5 per cent in 1931, but the tendency has been for imports to decline from that source since the 1931 high. The unusually large amounts from the Netherlands in 1929 and Belgium in 1933 are believed to be due to transshipments of the product from Germany.

Table 8. Salt cake (sodium sulphate crude): Imports for consumption by countries, 1929 - 1934

	1929	1930	1931	1932	1933	1934
Quantity (short tons)						
Germany	34,811	29,334	39,620	32,054	38,110	63,270
Belgium	2,022	8,811	8,454	16,156	35,610	17,793
Canada	2,545	8,897	19,246	7,980	12,423	3,648
Netherlands	50,838	5,336	4,695	3,578	4,063	3,634
All other 1/	1,419	18,057	732	1,355	9,062	1,356
Total	91,635	70,335	72,747	61,123	99,268	89,701
Value						
Germany	$316,242	$312,171	$469,308	$356,279	$354,246	$565,887
Belgium	18,642	128,301	78,677	161,627	330,114	158,256
Canada	21,638	94,260	188,687	77,193	109,329	34,198
Netherlands	459,220	46,754	60,894	38,880	37,426	39,656
All other 1/	14,051	218,946	5,943	10,095	54,191	7,144
Total	829,793	800,432	803,509	644,074	855,306	799,141
Value per short ton						
Germany	$9.08	$10.64	$11.85	$11.11	$9.30	$8.94
Belgium	9.22	14.56	9.31	10.00	9.27	8.56
Canada	8.50	10.59	9.8	9.67	8.80	9.37
Netherlands	9.03	8.93	12.97	10.87	9.21	10.91
All other 1/	9.90	12.13	8.12	7.45	5.98	5.27
Average	9.06	11.38	11.05	10.54	8.62	8.91
Per cent of total quantity						
Germany	38.0	41.7	54.4	52.4	38.4	70.5
Belgium	2.2	12.5	11.6	26.4	35.9	19.8
Canada	2.8	12.7	26.5	13.1	12.5	4.1
Netherlands	55.5	7.4	6.5	5.9	4.1	4.1
All other 1/	1.5	25.7	1.0	2.2	9.1	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: U.S. Tariff Commission.
1/ Chile, Spain, United Kingdom, Hungary and U.S.S.R. in Europe.

The points of impact of imports are shown in Table 9. In 1934, approximately 72 per cent of the imports entered through Gulf customs districts and about 12 per cent through North Pacific ports. It is in these coastal and immediate hinterland areas that the primary producers of salt cake hope to market their product. Consequently, these market areas represent the regions of keenest competition between domestic and foreign salt cake. In the Gulf area in particular this is true, since about 50 per cent of the total daily capacity of the sulphate pulp industry is represented in the coastal regions of the four States of Florida, Alabama, Mississippi, and Louisiana, and it is this industry which is the largest user of sodium sulphate.

Table 9. Salt cake (sodium sulphate, crude): Imports for consumption by customs districts, 1920 - 1934

Customs district	1934		1933		1931		1929	
	Short tons	Value	Short tons	Value	Short tons	Value	Short tons	Value
All districts	89,701	$799,141	99,269	$885,306	72,746	$803,509	91,633	$823,793
Gulf Ports								
Florida	17,007	152,139	13,434	134,050	3,775	123,504	-	-
Mobile	22,739	184,703	20,801	174,880	19,618	195,602	10,082	91,477
New Orleans	28,665	257,040	28,766	256,509	8,774	90,561	14,710	125,428
Sabine	-	-	306	6,911	-	-	8,012	72,919
Galveston	1,873	23,973	336	2,983	-	-	25,612	226,983
San Atnonio	-	-	25	179	-	-	-	-
Total	70,334	617,865	64,170	575,520	37,167	409,667	53,416	516,807
Pacific Ports								
Oregon	6,130	59,321	8,371	84,364	6,737	92,721	2,733	44,008
Washington	5,093	53,344	4,155	50,525	3,505	47,126	2,983	28,193
Total	11,223	113,165	12,526	134,889	10,242	139,847	5,721	72,201
Canadian Border								
Dakota	2,410	24,033	7,591	74,705	19,049	186,294	2,545	21,633
Duluth & Superior	797	6,447	4,333	31,369	197	2,393	-	-
Montana & Idaho	439	3,713	494	3,255	-	-	-	-
Maine & N.H.	-	-	-	-	-	-	4,043	35,751
Total	3,646	34,196	12,423	109,329	19,246	188,837	6,588	57,389
Atlantic Ports								
New York	743	3,553	5,973	30,642	53	326	1	15
Philadelphia	-	-	1,103	9,921	-	-	-	-
Maryland	3,696	28,827	2,402	19,333	1,783	20,613	5,944	55,488
Virginia	-	-	672	5,672	3,661	36,348	14,963	126,893
So. Carolina	54	543	-	-	-	-	-	-
Georgia	-	-	-	-	595	7,620	-	-
Total	4,453	33,923	10,149	65,568	6,091	65,308	20,908	183,396

Source: Foreign Commerce and Navigation and Bureau of Mines Information Circular #6833.

Table 10 indicates the trend of imports for consumption compared with domestic production for sale from primary and non-primary chemical sources of sodium sulphate. It may be observed that primary production has increased rapidly from 1929 to 1933, whereas non-primary chemical production for sale has decreased noticeably due to the technological changes already indicated. However, the net effect has been a decline in sodium sulphate available for sale from domestic sources. Imports for consumption which had risen rapidly in the 1920s reached their peak for that decade in 1929. They declined considerably in 1930, 1931, and 1932, and then reached a new high in 1933. Expressed in terms of a percentage of total domestic production for sale, imports for consumption increased from 51.7 per cent in 1929 to 61.8 per cent in 1933. This increase in large measure appears to be more attributable to chemical production decline in the domestic industry, particularly on the part of the non-primary producers, rather than to a material increase in imports in 1933 as compared with 1929. In 1934 imports for consumption declined to a level just under the 1929 figures. Despite this decline, the ratio of imports for consumption to primary production increased greatly due to the materially greater decline in the output of the primary producers. The ratio of imports to total domestic production for sale in 1934 is not known, since total chemical production of salt cake in 1934 is not available. However, chemical production for sale would have to increase about 16 per cent in 1934 over 1933 to maintain the same ratio of imports for consumption to total domestic production for sale in 1934.

Table 10. Imports for consumption compared with primary, non-primary chemical, and total domestic production for sale, 1929 - 1934

Year	Domestic production for sale			Imports for consumption	Ratio of imports for consumption to		
	Primary	Non-primary chemical	Total		Primary production	Non-primary chemical	Total production
					Per cent		
1929	23,075	154,640	177,716	91,634	397.1	59.2	51.5
1931	49,850	81,387	131,237	72,747	145.9	89.4	55.4
1932	49,965	1/	-	61,124	122.3	-	-
1933	64,261	96,898	161,149	99,269	154.5	102.4	61.6
1934	33,390	1/	-	89,701	268.6	-	-

Source: U.S. Tariff Commission and data in Table 5.

1/ Not available.

Important Competitive Factors

Foreign exchange

Since the rise in the dollar value of the German reichsmark from parity 23.8 cents in March 1933 to 40.2 cents in the last quarter of 1934, German goods have been at a disadvantage in the American market. To meet currency devaluation in other countries the German government has resorted to foreign exchange control measures, which have amounted to a devaluation of the reichsmark for purposes of foreign trade, while the free reichsmark within the country represents the gold standard currency.

This has been accomplished by means of "blocked" foreign-owned funds in the form of "blocked marks," of which there are several kinds, classified according to origin; and, more recently, by means of German scrip.

Originally, it was intended that these blocked funds be used to finance "additional exports," that is, exports from Germany in addition to such usual and regular exports as existed at the time when blocked funds were made available. However, blocked funds have become an instrument which has as its chief function the retention of control over already existing exports, the loss of which was threatened by various factors, such as devaluation of foreign currency, anti-German boycott, and rising production costs within Germany itself. Thus, in practice, "additional exports" may consist of any export order which an exporter is in danger of losing by reason of underbidding by a competitor in some other country. For example, an American importer may write a German exporter that the latter's prices are too high, and unless adjustments are made downward the order will be placed elsewhere. The German exporter is, under such circumstances, in a position to go before the German exchange control authorities with a demand for assistance from blocked funds.

Tho there are numerous types of blocked funds, only three types are of general interest insofar as financing of "additional exports" is concerned. These are: registered marks, scrip, and dollar bonds.

When scrip procedure was introduced in October 1, 1933, it was intended that the use of registered marks for financing exports be discontinued. However, American importing firms already holding permits to use registered marks in payment for German goods were allowed to use their unexpended portions for current importations. In recent months not only have old permits for the use of registered marks been extended, but new permits have also been issued. In the case of the registered marks, it is the foreign importer who takes the initiative and obtains a permit to buy registered marks. This allows him to buy marks at from 30 to 40 per cent below the day's rate for free marks, that is, for the usual and ordinary currency of Germany as quoted on the world's exchanges. Usually the foreign importer is permitted to pay for 50 per cent of the value of the imports with these registered marks purchased at a discount. However, declining German exports have compelled the German foreign exchange control authority to issue permits authorizing the use of 60 to 70 per cent in registered marks, in order to overcome the currency devaluation of foreign countries.

Use of scrip has been the prevailing procedure during 1934 for financing "additional exports." The German exporter in this instance takes the initiative by making application to receive scrip payment in reichsmarks. Technically, he is required to prove that he has had to accept an export order at a loss. Actually, as in the case of registered marks, evidence of compulsory price reduction to meet genuine or fancied foreign competition may be sufficient to place the transaction within the meaning of "additional exports."

Scrip has arisen out of interest payments on German public and private bonds held by American (and other foreign) investors. Payments are made through the German Conversion Bank. For example, the Conversion Bank forwards the American investor 50 per cent of the amount of interest due on bonds in dollars and 50 per cent in German scrip. The bondholder can hold and redeem this scrip at 100 per cent of its face value sometime, though the date is indefinite; or the scrip can be sold at a 50 per cent loss to certain American banks authorized by the Conversion Bank to buy at that reduced price. The American banks remit this scrip to the Gold Discount Bank in Germany and receive credit for the full purchase price paid by them, plus a commission for services rendered. The German exporter who has invoiced his goods at the lowest price necessary to meet competition, is paid in free reichsmarks for the full amount of the invoice by the American importer. To compensate for the difference between what he should have received for his goods and what he had to take, he buys scrip from the Gold Discount Bank at a discount sufficient to cover the loss on his order, and re-sells the scrip to the Conversion Bank at 100 per cent of its face value, thus compensating himself for the reduced prices necessary to meet competition.

The net result of this procedure is that German exporters make foreign sales which otherwise could not have been made, and American investors in German public and private bonds bear the burden through the reduced returns in interest on their loans in Germany.

A third method of financing "additional exports" is through the repurchase of German dollar bonds held in the United States. It is not known whether this procedure is in very wide use at the present time. It is believed that its application is reserved either for large transactions, or for those German exporters who have outstanding bond obligations in the United States. The German exporter does not actually buy and sell bonds, but he is authorized by the foreign exchange control authority to deal in so-called "export valuta" up to a certain percentage of the total invoice value of the goods shipped - usually about 50 per cent. German banks do the actual buying and selling of the bonds, and the exporter simply receives his additional payments from the profit on the bond transactions. Recently quotations on "export valuta" have run as high as 175 per cent, that is, German dollar bonds purchased in New York can be sold in Germany at a price 175 per cent over the New York purchase price. This permits the exporter to receive 40 per cent of the selling price in reichsmarks at the current exchange rate of about RM 2.50 per dollar and the balance in bonds, convertible through sale in Germany at a price sufficiently attractive as to compensate the exporter for making the sale under the conditions necessary to obtain the order.

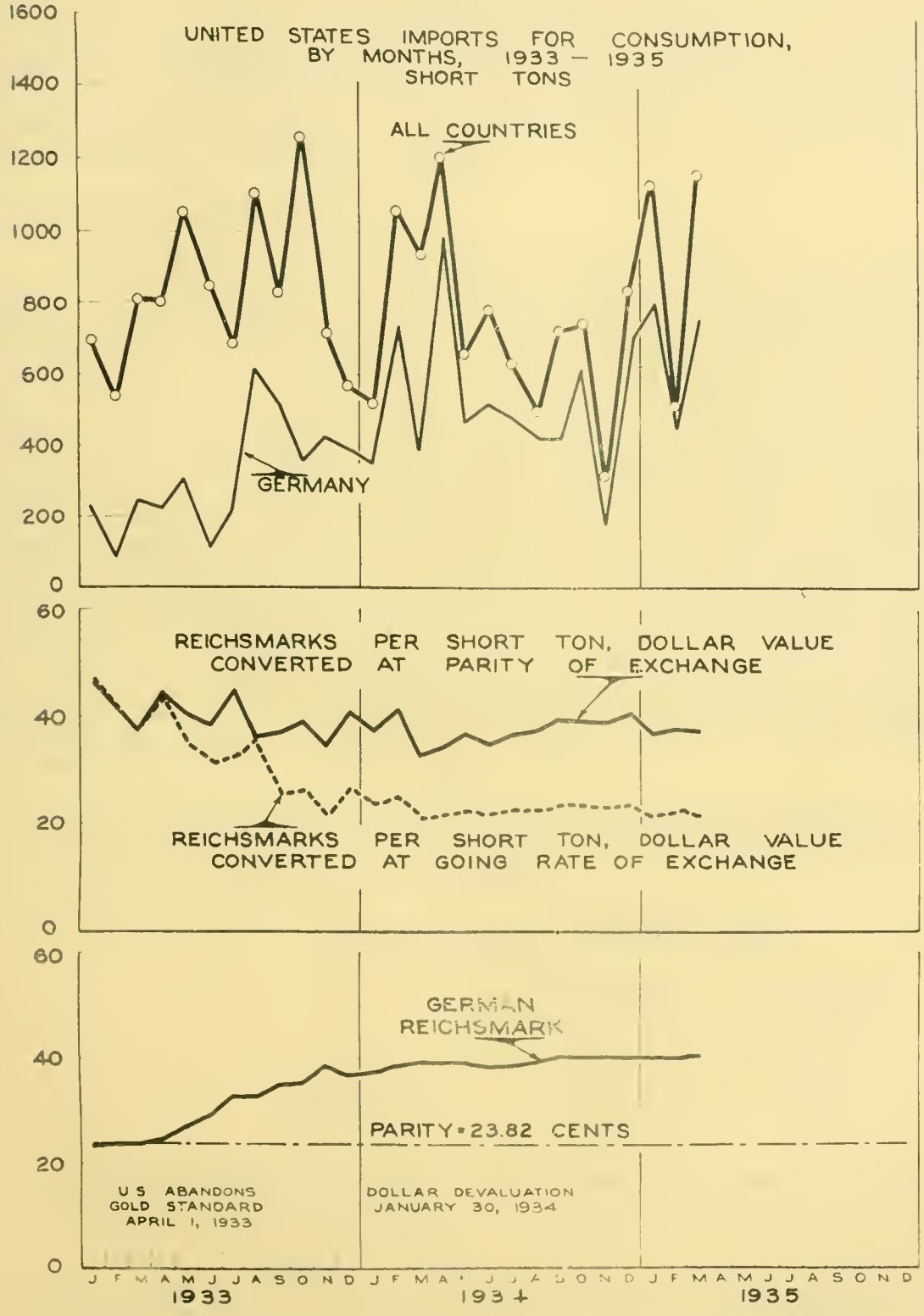
However, with respect to crude salt cake exported to the United States, the Sulphate Union disclaims receipt of payments in scrip or other forms of blocked funds, or of any form of drawback, bonus, or premium designed especially to facilitate the exportation of this product. If this be the situation, then foreign exchange control in Germany so far as it relates to salt cake, is a matter of potential, if not present concern.

The accompanying chart is presented to show the trend of United States imports of salt cake from Germany and the movement of the reichsmark in terms of dollars. It is significant that despite reichsmark appreciation in dollars during 1933 and 1934 Germany contributed 38,110 of the 99,269 short tons of salt cake imported into the United States in 1933 and 63,270 of the 89,701 short tons in 1934. Germany's percentage participation in the total United States imports of salt cake rose from 38.4 in 1933 to 70.5 in 1934. Expressed in another way Germany increased its exports of salt cake to the United States in 1934 by 25,160 more short tons than 1933. This is equivalent to a 66 per cent increase in 1934 over 1933.

The chart also shows the reichsmark equivalent of the dollar value of German salt cake per unit of one short ton based on the going rate of exchange in cents per mark from January 1933 to March 1935, as compared with the number of reichsmarks German sellers would have received for one short ton of salt cake had the old dollar mark parity of 23.82 cents been maintained.

These trends tend to raise some doubt as to the validity of the disclaimers of the Sulphate Union that the salt cake industry in Germany is not deriving some benefits through governmental exchange control devices.

SALTCAKE: COMPARISON OF U.S. IMPORTS FROM GERMANY WITH MOVEMENT OF DOLLAR/REICHSMARK EXCHANGE, AND VALUES PER SHORT TON IN TERMS OF MARKS, BY MONTHS, 1933-1935



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Comparability of product

German salt cake of the quality exported to the United States varies between 25 and 98 per cent purity. The Kaiseroda product is generally recognized as the best quality of German salt cake, and bears a slightly higher price than that produced in other quarters. In general, the salt cake produced chemically and from natural sources in the United States and the German salt cake are closely comparable in quality. So for most uses, technically, the source and method of production appears to be a matter of indifference. This fact confines the competitive situation largely to price and delivery.

Prices and transportation rates

As a rule, German salt cake producers sell to their American customers on long-term contracts, with prices quoted c.i.f. American port. However, since March 1933, prices on deliveries made to Gulf ports have been quoted f.o.b. European port. Salt cake delivered to Pacific Coast ports continues to be quoted c.i.f. Certain additional charges (about $1.90 per ton for bagging) are made for delivery in bags rather in bulk. Terms of sale are net cash, except where delivery is made to an American firm having a sales contract with the Sulphate Union. These long-term contracts usually contain a conditional price-reduction clause, thus enabling the American buyer to benefit from any price decline. Under this clause reductions in price have been made from time to time since 1931 from $14.75 per short ton c.i.f. Gulf ports, to $9.25 per short ton f.o.b. steamer European port, at the present time the buyer now making his own arrangements for shipment and its attendant costs, or about $12.35 per short ton, Gulf port. Prices to customers in the Pacific Northwest have also been reduced from $16.95 per short ton c.i.f. American port in 1932 to $14.50 in 1933, and to $13.75 c.i.f. in 1934. This latter price appears to be the prevailing one for German salt cake delivered to the Pacific Northwest ports at the present time.

Ocean transportation rates from Antwerp, Hamburg and Bremen, Germany, and Rotterdam, Netherlands, to New Orleans, La. for the participating steamship lines in that service are as follows:

Salt Cake (Sodium sulphate, crude)

	Per thousand kilos	Short ton equivalent
In bags	$3.25	$2.95
In casks	3.75	3.40
In bulk	3.00	2.72

These rates apply to Mobile, Ala.; Galveston, and Houston, Texas, also, but not to Panama City, Fla.

It should be noted that the rate of $3.00 per thousand kilos was originally shown in the shipping tariff schedule, but subsequently was deleted prior to the receipt of the tariff in Washington, November 16, 1934. Consequently this occasions some doubt as to the precise rate

applicable to salt cake shipments in bulk to the Gulf ports.

On the basis of the above rates the price of German salt cake in bulk, wharfside, New Orleans, La., would be, therefore, approximately $13.00 per short ton, not including marine insurance and other charges incidental to ocean shipping. Also, there must be added wharfage and unloading charges, plus freight to inland points of consumption, such as Camden, Arkansas and Tuscaloosa, Ala. These inland rates, which are import commodity rates and lower than domestic commodity rates between the same points, are as follows: New Orleans to Camden, Ark., 15 cents per 100 pounds carload lots, or $3.31 per short ton; New Orleans to Tuscaloosa, Ala., 16½ cents per 100 pounds carload lots or $3.53 per short ton. These charges include the additional 7 per cent emergency rate on the line haul charge, when such a charge is not in excess of 2 cents per hundredweight. The delivered cost of German salt cake to Camden, Ark., therefore, would approximate $15.96 to $16.21 per short ton, allowing 75 cents to $1.00 to cover marine insurance and the unloading and handling charges at the American dock, etc. The delivered cost at Tuscaloosa, Ala., would approximate $16.28 to $16.53 per short ton.

The ocean rate on salt cake from Antwerp, Hamburg, Bremen, Rotterdam and Amsterdam to the Pacific ports of Los Angeles and San Francisco, Calif., Portland, Ore., Seattle and Takoma, Washington, is $8.50 per thousand kilos, or $7.71 per short ton. Longview, Washington, which is also the destination of German salt cake shipments, is not a terminal port of discharge for ocean carriers constituting the ocean freight conference, the rates of which are quoted herein, hence post-terminal rates are imposed on shipments destined to this port. The post-terminal rates applicable to Longview, Washington, follow:

Per 1000 kilos

On rates over $10.00	On rates of $10.00 and below
1000 tons and over - no extra	No extra
500 tons to 1000 tons - $2.50	$1.25
250 tons to 500 tons - $5.00	2.50
Under 250 tons - $10.00	5.00

Shipments destined ultimately to Camas and Port Townsend, Washington, would bear the rate to the terminal ports of Portland, Ore., and Seattle, Washington, respectively, plus additional charges for reshipment by coast wise and river lines.

It is unlikely that shipments from abroad would run less than 500 tons per shipment, hence the post-terminal rate to be added to the terminal rate would be $1.25 per thousand kilos, or $1.14 per short ton. The rate to Longview, Washington, therefore, would be $8.85 per short ton wharfside, not including marine insurance and incidental shipping expenses. At the contract price of $12.75 c.i.f. American port, German shipments to Longview, for example, would yield the Sulphate Union $3.90 per short ton, from which would have to be deducted German inland transportation rates as well as marine insurance and other incidental ocean shipping charges not accounted for.

Since 1930 the trend of salt cake prices has been downward. It is difficult, however, to accurately describe the price situation for the domestic product, since it is produced under various conditions at widely scattered points and transportation rates bulk large in the final price to the consumer.

The Bureau of Labor statistics report the wholesale price of domestic salt cake from the chemical industry at $13.68 per short ton in bulk at the works in 1932, $13.00 in 1933 and 1934, and $12.00 in March 1935.

The Oil, Paint and Drug Reporter, a trade journal, reports prices for salt cake each week. This medium of trade information quotes a range of prices of salt cake in bulk at the works, e.g. $13.00 to $18.00 per ton. This quotation has varied little, if any, from week to week during 1933 and 1934. At present, May 1935, salt cake is quoted at $12.00 - $16.00 per ton by this journal. It is said that the low quotation constitutes the bulk of sales, which are usually made on a contract basis during the early part of the year. Occasional sales in small amounts, and quality differences, account for the range.

However, these reported price quotations are more or less nominal and are significant only as they indicate the trend of prices. In the chemical trade the reported f.o.b. price for salt cake represents the price obtained by suppliers of salt cake enjoying the lowest transportation rates to the consuming point. The real f.o.b. price to other producers is less than the quoted f.o.b. price by the amount of the freight absorbed by the shipper whose location in relation to the market is less favorable. The extent of any market, therefore, is limited by the degree of variance in production costs in the trade and the willingness and ability of less favorably situated chemical companies to absorb freight. The situation is further complicated by the fact that the chemical industry produces salt cake along with many other chemicals.

With respect to the producers of salt cake as a primary objective which includes the producers of salt cake from natural sources, the range of prices of salt cake, f.o.b. plant, is very wide. This is due in part to varying production methods and costs. Moreover, freight rates are of cardinal importance in the marketing problem. Thus, in 1932 the range of f.o.b. prices of the complainant primary producers was from $5.30 to $14.80 per short ton on shipments destined to consumption points in the lower Mississippi Valley, from points as far distant as the Nevada deposits, and as near to that market area as a producing point not far from New Orleans. In 1934 the range was from $3.10 to $13.08 f.o.b. these points.

The accompanying map shows the location of the leading points of production of the Sulphate Pulp Industry, which is the largest single consumer of crude salt cake; the location of the properties of the complainant producers, whose primary objective is the production of salt cake, and transportation rates from the points of production to points of consumption in the sulphate pulp industry. The location of the plants of a few non-primary producers of chemical salt cake is also shown. As already indicated, chemical plants producing salt cake are numerous in the region East of the Mississippi and North of the Ohio Rivers, and obviously are in such a strategic position to meet the demand for salt cake in this market area that the primary producers of salt cake and the importers of German salt cake, cannot

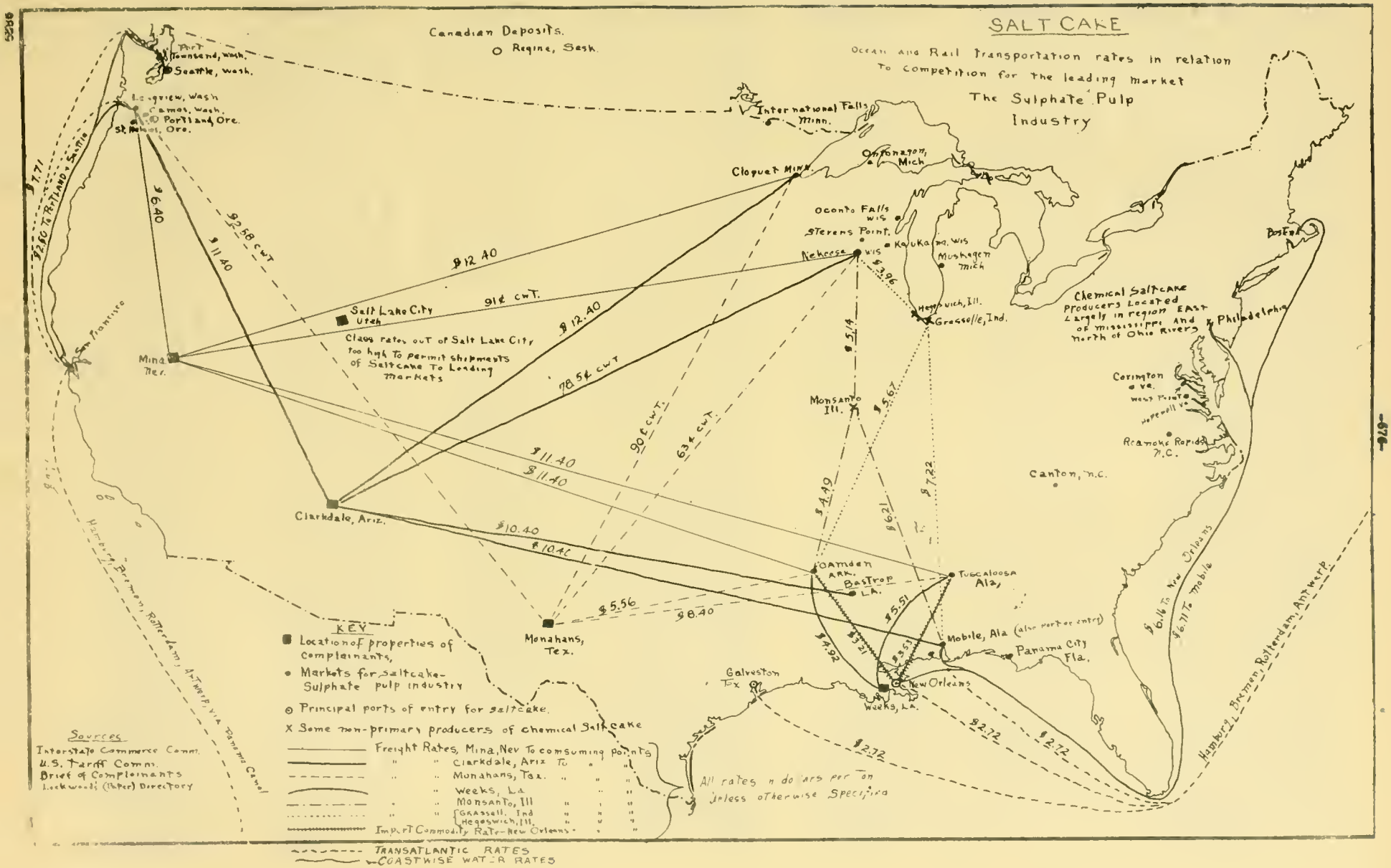
easily compete with them under present conditions. It is not likely that this domestic chemical salt cake would be shipped into the Gulf market area either coastwise or by rail, due to transportation costs, except possibly in the case of chemical salt cake produced in Monsanto and Hegeswich, Ill., and Grasselli, Ind. Even these plants would be more likely to serve their natural market areas, including the Wisconsin sulphate pulp mills, unless their stocks of salt cake became excessive in terms of the demand in their own natural market areas, due to an increased demand for hydrochloric acid which is produced jointly with salt cake. The fact that the annual salt cake requirements of the large consumers are usually provided for by contracts arranged early each year, it is doubtful whether the chemical producers would enter this Gulf market area to any great extent other than occasionally. It is highly unlikely that they would serve the more distant Pacific Northwest under the present price and competitive conditions.

It appears, therefore, that the so-called primary producers, largely composed of the complainants, and the German Sulphate Union, would serve the Gulf and Pacific Northwest coastal regions. The competitive position of the domestic primary producers is revealed by the transportation rates shown on the map. Thus, salt cake shipped from Weeks, La., to Camden, Ark., bears a rail charge of 23 cents per 100 pounds in carload lots, minimum weight 40,000 pounds, plus the emergency 7 per cent rate on the line haul charge, or $4.92 per short ton. In view of the present approximate delivered price of German salt cake to Camden, $15.96 to $16.21 per short ton, the producer at Weeks could not operate with production costs above nor afford to quote a f.o.b. mill price much in excess of $11.04 to $11.29 per short ton, without losing trade to German competitors. Probably better delivery service due to proximity to the market would allow the domestic salt cake producers some leeway in their price quotations.

Shipments of salt cake from Monahans, Texas, to Camden, Ark., bear a rate of 26 cents per 100 pounds in carload lots, minimum weight 80,000 pounds. This is equivalent to $5.56 per short ton, including the additional emergency 7 per cent line haul charge. The primary producer at Monahans, therefore, could not quote a price f.o.b. mill much above $10.40 to $10.65 per short ton and obtain business against German competition at this consuming point under the present price quotations. From Monahans, Texas to Tuscaloosa, Ala., salt cake shipments in carload lots bear a rate of $8.50 per short ton, including the emergency charge. Therefore, to meet the competition of German salt cake shipped inland by rail, the f.o.b. price Monahans must not greatly exceed $7.85 to $8.13 per short ton in the Tuscaloosa market.

The production costs of the domestic primary producers attempting to compete with German salt cake at the points of consumption mentioned above, according to data supplied by the complainants, are either about equal to or in some instances higher than the f.o.b. prices which they must quote to be able to compete with German salt cake and obtain orders from the sulphate pulp mills and other users of salt cake in the market areas considered herein.

Freight rates from Mina, Nevada and Clarkdale, Arizona, under the present price conditions, appear to make it extremely difficult for these producing points to enter the Gulf market area in competition with their more


SALT CAKE
Ocean and Rail transportation rates in relation to competition for the leading market
The Sulphate Pulp Industry
Canadian Deposits.
Regina, Sask.
Port Townsend, Wash.
Seattle, Wash.
Longview, Wash
Camas, Wash.
Portland, Ore.
St. Helens, Ore.
International Falls Minn.
Ontonagon, Mich
Cloquet Minn.
Oconto Falls Wis
Stevens Point.
Kaukauna, Wis
Nekoosa Wis
Muskegon Mich
Hegeswich, Ill.
Grasselle, Ind.
Salt Lake City Utah
Class rates out of Salt Lake City too high to permit shipments of Saltcake to Leading Markets
Mina Nev.
San Francisco
Clarkdale, Ariz.
Monsanto Ill.
Camden Ark.
Bastrop La.
Tuscaloosa Ala.
Mobile, Ala (also port of entry)
Panama City Fla.
New Orleans
Weeks, La.
Galveston Tex
Monahans, Tex.
Chemical Saltcake Producers Located Largely in region East of Mississippi and North of Ohio Rivers
Philadelphia
Boston
Covington Va.
West Point
Hopewell Va.
Roanoke Rapids N.C.
Canton, N.C.
$6.16 To New Orleans
$6.71 To Mobile
Hamburg, Bremen, Rotterdam, Antwerp
Hamburg, Bremen, Rotterdam, Antwerp, via Panama Canal
$7.71
$2.50 To Portland & Seattle
$6.40
$11.40
$2.58 CWT
$12.40
91¢ CWT.
$12.40
78.5¢ CWT
90¢ CWT.
63¢ CWT.
$11.40
$11.40
$10.40
$10.40
$5.56
$8.40
$3.96
$5.14
$5.67
$4.49
$6.21
$7.22
$5.51
$4.92
$3.21
$3.53
$2.72
$2.72
$2.72
KEY
Location of properties of complainants,
Markets for saltcake-Sulphate pulp industry
Principal ports of entry for saltcake.
X Some non-primary producers of chemical Saltcake
Freight Rates, Mina, Nev To consuming points
" " Clarkdale, Ariz To " "
" " Monahans, Tex. " " "
" Weeks, La " "
" " Monsanto, Ill " " "
" " Grassell, Ind " " "
Hegeswich, Ill. " " "
Import Commodity Rate-New Orleans " " "
All rates in dollars per ton unless otherwise specified
TRANSATLANTIC RATES
COASTWISE WATER RATES
Sources
Interstate Commerce Comm.
U.S. Tariff Comm.
Brief of Complainants
Lockwood's (Paper) Directory

favorably located domestic competitors and the German product. The burden of freight rates, as reference to the map would show, is somewhat less in the case of Clarkdale but burdensome, nevertheless under the prevailing market conditions. On the other hand, Mina is more favorably located to serve the Pacific Northwest demand for salt cake. With German salt cake quoted at $12.75 per short ton, c.i.f. at the Pacific Northwest points, Mina can compete as long as production costs and quoted mill prices do not greatly exceed $6.15 per short ton. West Coast chemically produced salt cake and imports from Chile and Canada tend to complicate the situation in this area.

Developments at Trona, Calif., in the Searles Lake Region, where salt cake was produced in 1934 as a by-product of the potash and borax industry, offer possibilities for the rise of a strong competitor both of the German and present domestic suppliers of the salt cake markets on the Pacific Coast, also. Furthermore, water rates out of San Francisco northward to Portland, Oregon, and Seattle, Washington, are relatively low.

At the present moment the company whose plant is under construction near Salt Lake City is precluded from entering the market competitively either against domestic or German salt cake, due to extremely high freight rates. Such rates as are quoted at present are class rates. Hence this potential producer must obtain a reasonable commodity rate on salt cake in order to enter the existing markets.

In general, it would appear that the domestic primary producers are suffering from uneconomic locations in relation to markets, a disadvantage which is accentuated as long as the price of salt cake is relatively low and freight rates make up such a large proportion of the delivered price to the consumer. Furthermore, these small primary producers are obliged to compete with salt cake produced by large domestic and German chemical producers and the Germans are favored by ocean transportation rates which are very low in comparison with our railroad rates.

In view of the fact that foreign produced salt cake enters the country largely through the Gulf and Pacific Northwest ports, Table 11 is submitted to compare these entries in recent years with the production of primary producers of salt cake in the United States who, by reason of their location, must also serve the Gulf and Pacific Northwest market areas in competition with the German product.

The data in Table 11 reveal that a larger and larger percentage of the imports for consumption are entering the Gulf and Pacific Northwest ports in the regions which are the market areas most economically available to the domestic primary producers. In 1931, 65 per cent of the imports for consumption entered through the customs in these two areas, whereas through the same areas in 1934 there entered 91 per cent of the total imports for consumption.

In 1933 the ratio of imports into Gulf and Pacific Northwest ports was 119 per cent of the production of the domestic primary producers; whereas, in 1934 the ratio rose to 244 per cent. This was due to a decline of slightly less than 50 per cent in the production of salt cake by the primary producers, while imports for consumption declined only about 10 per cent. The

Table 11. Trend of competition between imports for consumption and domestic primary production serving Gulf and Pacific Northwest market areas, 1929-1934

	Imports in short tons entering				Percentage of total entering Gulf and Pacific Northwest ports	Domestic production by primary producers	Ratio of imports into Gulf & Pacific Northwest ports to primary production	Ratio of total imports to domestic primary production
	Gulf ports	Pacific Northwest ports	Pacific Northwest and Gulf ports	All ports				
					Per cent			Per cent
1929	58,416	5,721	64,137	91,633	70	23,075	278	397
1931	37,167	10,242	47,409	72,746	65	49,850	95	146
1933	64,170	12,526	76,696	99,269	77	64,251	119	155
1934	70,334	11,228	81,562	89,701	91	33,390	244	289

Source: Basic data from tables 5 and 9.

ratio of total imports for consumption to domestic primary production in 1933 was 155 per cent and in 1934, 269 per cent.

The ratio of total imports for consumption to total domestic production, which includes both chemical and natural salt cake, as reference to Table 10 will show, was 61.6 per cent in 1933, which is about 10 per cent higher than it was in 1929 and about 6 per cent higher than it was in 1931. The total chemical salt cake production for sale in 1934 is not known, but unless the output from this source increased by about 16 per cent in 1934 over 1933, the ratio of imports for consumption to total domestic production for sale would be greater in 1934 than they were in 1933.

Effect of the National Industrial Recovery Act

Code provisions

The Code of Fair Competition for the Chemical Manufacturing Industry, on and after its effective date, February 30, 1934, restricts the hours of work of persons (with certain exceptions) employed within the chemical industry to no more than an average of 40 hours per week during any period of four months and to not more than 48 hours during any week.

Minimum wage provisions are summarized as follows: On and after the effective date of the Code, the minimum wages paid by any employer in the chemical industry to any employee shall not be less than 35 cents per hour when employed in the Southern district, that is, territory south of Maryland, West Virginia, Kentucky and Missouri, and including the states of Oklahoma and Texas; no less than 40 cents per hour elsewhere in the United States, provided, however, that if the hourly rate for the same class of work on July 15, 1929 was less than 35 cents per hour in the Southern district or less than 40 cents per hour elsewhere in the United States, in which case the minimum wages paid hereunder shall not be less than the hourly rate paid on June 15, 1929, and in no event less than 25 cents per hour in the Southern district and 30 cents per hour elsewhere in the United States, except wherever a state provides a higher minimum wage, in which case the wage per hour shall not be less than the minimum provided by the state law. Certain exceptions are made to these provisions in the case of apprentices and the aged or infirm kept on the payroll as watchmen, etc.

Costs, wage rates and employment

With respect to the complainant primary producers it is difficult to formulate any general conclusions with respect to the effect of the National Industrial Recovery Act on costs, wage rates and employment.

One complainant is a company whose plant has been under construction and has as yet not seen fit to go into production, allegedly because of price conditions due to imports. Another leased its properties in 1930 to a company which is not a party to this complaint, consequently, data are lacking in this instance. A third company produced in 1933 and provided data with respect to costs, payroll and employment for that year, but it has not been operating in 1934 since the code became effective.

The remaining two complainants have operated in pre-code and post-code periods, but their production technique differs considerably, one obtaining salt cake from brine by means of a chilling process, and the other treating common salt (sodium chloride) chemically and obtaining salt cake. In the one case labor costs were slightly under 41 per cent of total costs of production (not including interest on investment) in the last half of 1933, and 33 per cent for a representative period under the code. In this instance the downward trend in percentage of labor costs to total costs per unit may have been due to the fact that this company had just begun operations about the middle of 1933 and was able to cut labor costs per unit as production got under way. Also, in this case total costs per ton were less after the code. In the other instance labor costs before the code constituted about 11 per cent of total production costs, exclusive of interest on investment, and slightly over 15 per cent after the code. Total costs per unit were 6 per cent higher in the post-code than in the pre-code period.

However, the costs submitted by this company which produces salt cake chemically are subject to question for several reasons. In the first place this company buys its raw material, salt, from its parent and the price paid for it may or may not be at the prevailing market price. Secondly, it produces hydrochloric acid in conjunction with salt cake, and though salt cake is its primary product, it is not known from the available information precisely how costs are allocated between the two products.

With respect to employment, an increase in the numbers employed was experienced by the two companies operating when the code went into effect. This increase amounted to 35 per cent, approximately. However, it is not known to what extent code requirements have precluded operation and employment in the plants which have been and still are closed.

In the instances where data were sufficiently complete to permit analysis, it appears that hours of work per week per worker have been reduced to conform to the code requirements and the average weekly wage has risen slightly since the code became effective.

In the case of the one operating company giving nearly complete data, the average hourly wage rate, though low in absolute amount, is relatively much higher than it was in 1933, and slightly higher than it was in October, 1929. In terms of the code, the wage rate in this case would conform to the code requirements under the exception "That if the hourly wage rate for the same class of work, on July 15, 1929, was less than 35 cents per hour in the Southern district * * * and in that case the minimum wages paid hereunder shall not be less than the hourly rate paid on July 15, 1929 and in no event less than 25 cents per hour in the Southern district * * *."

Statistical Appendix

SALT CAKE

LIST OF TABLES

Salt cake (data for chart).

Bureau of Labor Statistics wholesale price of crude salt cake and trend of unit values of salt cake from various sources, 1925-1934.

Salt cake prices (wholesale) per ton, spot, New York.
(U.S. Tariff Commission)

Niter cake prices per ton, bulk, at works, spot New York.
(U.S. Tariff Commission)

Glauber salt prices (wholesale) per 100 pounds, spot, New York.
(U.S. Tariff Commission)

Glauber salt prices (imported), bags, 100 pounds, spot, New York.
(U.S. Tariff Commission)

Domestic production of hydrochloric acid and chemical salt cake, by census years, 1923-1933.

Consumption of salt cake in the glass industry, by States, 1927 and 1929.

Sulphate pulp mills and their daily capacity.

Salt cake (sodium sulphate, crude): Production and value data with indices, classified on the basis of objective, as either non-primary - chemical or primary producers.

Number of reichsmarks per dollar: New York exchange.

Comparative cost of German and domestic salt cake on Pacific Coast in 1929.

Sodium sulphate, all forms: United State imports for consumption, 1923-1933.

Salt cake (sodium sulphate, crude): Trend of imports for consumption, 1929-1934.

Salt cake (data for chart)

Statistical period	Imports for consumption: All countries	Imports for consumption: Germany	Reichsmarks per short ton - dollar value converted at - Parity of exchange	Reichsmarks per short ton - dollar value converted at - Going rate of exchange	Value of reichsmark in cents (Par = 23.82¢)
	Short tons				
1933					
January	6,955	2,257	46.01	46.10	23.77
February	5,429	859	41.56	41.54	23.83
March	8,173	2,438	37.66	37.31	23.85
April	8,063	2,225	44.71	43.66	24.39
May	10,543	3,021	40.51	35.27	27.36
June	8,464	1,674	38.08	31.48	28.81
July	6,819	2,299	44.92	32.16	33.26
August	11,032	6,184	36.27	26.41	32.71
September	8,214	5,202	36.86	24.78	35.43
October	12,616	3,669	38.58	25.93	35.43
November	7,166	4,351	34.30	21.36	38.24
December	5,797	3,930	40.76	26.01	37.32
Total	99,269	38,110			
1934					
January	5,236	3,585	36.82	23.33	37.59
February	10,612	7,430	40.72	24.94	38.88
March	9,407	3,917	33.84	20.32	39.66
April	12,034	9,943	35.47	21.34	39.59
May	6,565	4,790	36.52	22.04	39.47
June	7,837	5,284	34.59	21.51	38.30
July	6,301	4,706	37.07	23.94	38.49
August	5,002	4,237	37.49	22.61	39.48
September	7,352	4,293	39.34	23.26	40.28
October	7,508	6,114	39.12	23.04	40.45
November	3,276	1,836	38.54	22.83	40.21
December	8,471	7,134	40.09	23.76	40.19
Total	89,701	63,270			
1935					
January	11,482	8,054	36.36	21.61	40.06
February	5,206	4,551	37.99	22.55	40.12
March	11,730	7,650	37.15	21.92	40.37

Source: U.S. Tariff Commission and Federal Reserve Board.

Bureau of Labor Statistics wholesale price of crude salt cake and trend of unit values of salt cake from various sources, 1925-1934

Year	B.L.S. price per short ton	Chemical 1/ value per short ton	Natural value per short ton	Imported, value per short ton
1925	$19.35	$13.61	$3.52	$9.50
1926	20.00	-	8.53	10.58
1927	17.93	15.93	7.34	8.98
1928	12.91	-	6.48	8.98
1929	16.62	11.84	5.46	9.06
1930	17.86	-	6.32	11.38
1931	15.92	15.48	6.09	11.05
1932	13.68	-	6.53	10.54
1933	13.00	12.84	5.27	8.92
1934	13.00	-	8.90	8.91

Sources: B.L.S.: Census of Manufactures; U.S. Tariff Commission; Bureau of Mines.

1/ Available by census years only.

Salt cake prices (wholesale) per ton, spot, New York

(U.S. Tariff Commission)

Year	January	April	July	October
1912	$11	$11	$11	$11
1913	11	11	11	11
1914	11	11	11	11
1915	11	11	11	11
1916	11	12	-	11
1917	-	-	-	30
1918	30	30	30	35
1919	25	18	12	14
1920	17	21	40	50
1921	25	25	17	17
1922	18	17	18	25
1923	25	25	25	24
1924	22	23	17	18
1925	18	20	18	20
1926	20	20	20	20
1927	20	18	18	18
1928	17	17	10	10
1929	15	15	15	18
1930	20	20	18	14.50
1931	14.50	14.50	17	16
1932	15	15	13	13
1933	13	13	13	13
1934	13	13	13	13

Niter cake prices per ton, bulk, at works, spot, New York

(U.S. Tariff Commission)

Year	January	April	July	October
1922	-	-	-	$6.50
1923	$8	$6	$6	6
1924	6	5.50	5.50	5.50
1925	5.50	5.50	4.50	4.50
1926	4.50	4.50	4.50	4.50
1927	4.50	4.50	4.50	4.50
1928	4.50	4.50	4.50	10.
1929	12	14	14	14.50
1930	15	14	14	14
1931	14	14	14	14
1932	13	13	10	10
1933	10	10	10	12
1934	12	12	12	12

Glauber's salt prices (Wholesale)per 100 pounds, spot, New York

(U.S. Tariff Commision)

Year	January	April	July	October
1912	$0.60	$0.60	$0.60	$0.60
1913	.60	.60	.60	.60
1914	.60	.60	.60	.60
1915	.60	.60	.60	.60
1916	.60	.70	.65	.60
1917	.60	.60	.65	-
1918	.90	1.30	1.50	2.00
1919	1.75	1.50	1.00	1.25
1920	1.15	1.60	2.30	2.10
1921	1.75	1.75	1.30	1.75
1922	1.00	.95	.85	1.25
1923	1.25	1.25	1.30	1.35
1924	1.35	1.35	1.20	1.25
1925	1.25	1.25	1.25	1.20
1926	1.20	1.10	1.10	1.00
1927	1.10	1.10	1.10	1.10
1928	1.10	1.00	1.00	1.00
1929	1.00	1.00	1.00	1.00
1930	1.00	1.00	1.00	1.00
1931	1.00	1.00	1.00	1.00
1932	1.00	1.00	1.00	1.00
1933	1.00	1.00	1.00	1.00
1934	1.00	1.00	1.00	1.00

Glauber's salt prices (imported), bags, 100 pounds, spot, New York

(U.S. Tariff Commission)

Year	January	April	July	October
1925	-	-	-	$0.85
1926	$0.75	$0.85	$0.80	.70
1927	.90	.80	.70	.70
1928	.70	.70	.70	.70
1929	.70	.70	.70	.70
1930	.70	.70	.70	.70
1931	.70	.70	.70	.70
1932	.70	.70	.75	.75
1933	.75	.75	.75	.75
1934	1.05	1.05	1.05	1.05

Domestic production of hydrochloric acid and chemical salt cake, by census years, 1923-1933

Year	Acid production - 100 per cent basis: Short tons	Value	Salt cake produced with acid: Short tons	Value 1/
1923	69,092	$3,102,172	187,064	$3,943,309
1925	71,619	2,976,155	189,293	3,144,157
1927	70,848	3,016,014	208,565	3,322,440
1929	81,307	3,195,415	206,612	2,446,286
1931	2/ 40,687	2,422,439	119,399	1,848,297
1933	2/ 44,895	2,386,790	143,148	1,838,020

Source: Census of Manufactures.

1/ Based on value per ton of salt cake sold.

2/ Includes only tonnage for sale, therefore not strictly comparable to other figures.

Consumption of salt cake in the glass industry, by States, 1927 and 1929

(Short tons)

State	1927	1929
California	95	314
Illinois	4,133	3,739
Indiana	3,635	3,464
New York	494	473
Ohio	3,719	2,729
Oklahoma	1,166	814
Pennsylvania	14,575	14,717
West Virginia	9,809	7,684
Other States	9,658	8,673
Total	47,284	42,607

Source: Basic data, Census of Manufactures, 1929, p. 871.

Sulphate Pulp Mills and Their Daily Capacity

Location	Company	Daily capacity in pounds
Southern		5,180,000
Alabama		
Mobile	Southern Kraft Corp.	500,000
Tuscaloosa	Gulf States Paper Corp.	375,000
Arkansas		
Camden	Southern Kraft Corp.	425,000
Florida		
Panama City	Southern Kraft Corp.	850,000
Louisiana		
Bastrop	Southern Kraft Corp.	700,000
Bogalusa	Bogalusa Paper Co. Inc.	500,000
Calcasieu	Calcasieu Sulphate Paper Co.	110,000
Hodge	So.Advance Bag and Paper Co.Inc.	400,000
West Monroe	Brown Paper Mill Co.	1,000,000
Mississippi		
Moss Point	Southern Kraft Corp.	320,000
Middle Atlantic		1,370,000
North Carolina		
Canton	Champion Fibre Co.	200,000
Roanoke Rapids	Halifax Paper Co. Inc.	70,000
Virginia		
Covington	W.Virginia Pulp and Paper Co.	400,000
Hopewell	Hummell-Ross Fibre Corp.	200,000
West Point	Chesapeake Corporation	500,000
New England		110,000
Maine		
Van Buren	International Paper Co.	110,000
North Central and Lake Region		1,700,000
Wisconsin		
Kankanna	Thilmany Pulp and Paper Co.	180,000
Nosinee	Nosinee Paper Mills Co.	200,000
Nekoosa	Nekoosa-Edwards Paper Co. Inc.	300,000
Oconto Falls	Continental Paper and Bag Corp.	150,000
Stevens Point	Stevens Point Pulp and Paper Co.	70,000

Sulphate Pulp Mills and Their Daily Capacity (Continued)

Location	Company	Daily Capacity in pounds
Minnesota		
Cloquet	Northwest Paper Co.	150,000
International Falls	Minnesota and Ontario Paper Co.	180,000
Michigan		
Filer City	Filer Fibre Co.	120,000
Muskegon	Central Paper Co.	200,000
Ontonagon	Ontonagon Fibre Corp.	150,000
Pacific Northwest		1,170,000
Washington		
Camas	Crown-Willamette	200,000
Longview	Longview Fibre Co.	240,000
Port Townsend	National Paper Products Co.	500,000
Oregon		
St. Helens	St. Helens Pulp & Paper Co.	230,000
All States	Total	9,530,000

Source: Lockwood Directory, 1934.

Salt cake (sodium sulphate, crude): Production and value data with indices, classified on the basis of objective as either non-primary chemical or primary producers.

Year	Non-primary chemical production 1/				Primary production 2/			
	Short tons for sale	Index of production	Value	Index of value	Short tons	Index of production	Value	Index of value
			000s				000s	
1929	154,640	100.	$1,831	100.	23,075	100.	$226	100.
1931	81,387	52.6	1,062	58.	49,850	216.	466	206.2
1933	96,898	62.7	1,119	61.1	64,251	278.4	478	211.5
1934	2/	2/	2/	2/	33,390	144.7	2/	2/

Source: Basic data from Census of Manufactures and Bureau of Mines: Adjusted to show actual primary and non-primary chemical production.

1/ Chemical companies producing a variety of chemical products, including salt cake.

2/ Primary production indicates production where primary objective is salt cake. Includes all producers from natural sources and one chemical producer.

Number of reichsmarks per dollar: New York Exchange 1/

Month	1933	1934	1935
January	4.21	2.64	2.49
February	4.21	2.56	2.50
March	4.21	2.52	2.47
April	4.20	2.51	2.49
May	3.59	2.50	2.48
June	3.53	2.51	
July	3:18	2.51	
August	3.15	2.52	
September	2.93	2.48	
October	2.72	2.48	
November	2.75	2.49	
December	2.65	2.49	

Source: London and Cambride Economic Service (Supplement to Monthly Bulletin), Vol. XIII, No. 4, May 7, 1935, p. 136.

1/ First of month quotations.

Comparative Cost of German and Domestic Salt Cake on Pacific Coast in 1929

(Source: American Sodium Co., Rhodes Salt & Borax Co., Sodium Products Corp., and Westates Co. Brief. Tariff Hearings before Committee on Finance. U.S. Senate, 1929. Free List, p.577)

	German	American byproduct	American Natural
Railroad freight	$2.28	-	$7.50
Ocean freight	1/4.18	$3.50	-
Fees and insurance	.18	.05	-
Commission and incidentals	.16	.50	-
Sacking	1.90	2.25	2.25
Production costs	2/ 4.50	10.00	6.75
Total	13.20	15.30	16.50
German sales price	15.95	15.95	15.95
Profit	2.75	0.65	3/ 0.55

1/ Includes $1.20 Panama Canal tolls. 2/ Estimated. 3/ Loss

Comparative Cost of German and Domestic Salt Cake on Gulf Coast, in 1929

(Source: American Sodium Co., Rhodes Salt & Borax Co., Sodium Products Corp., and Westates Co. Brief. Tariff Hearings before Committee on Finance. U.S. Senate, 1929. Free List, p. 577.)

	German	American byproduct	American Natural
Railroad freight	$2.38	1/ $7.00	$12.00
Ocean freight	2.70	-	-
Fees and insurance	.18	-	-
Commission and/or incidentals	.16	-	-
Production costs	2/ 4.50	10.00	6.75
Total	9.92	17.00	18.75
German price per ton, Gulf ports	13.50	13.50	13.50
Profit	3.58	3/ 3.50	3/ 5.25

1/ Average rail rate (Illinois, Missouri, or Ohio)
2/ Estimated
3/ Loss

Sodium sulphate, all forms. United States imports for consumption, 1922-1933

	Salt cake	Value	Anhydrous (refined) sodium sulphate	Value	Glauber salt	Value
	Short tons		Short tons		Short tons	
1922	714	$8,537	1/	1/	6,818	$74,155
1923	5,233	84,051	84	$648	9,013	100,145
1924	3,427	40,883	132	4,443	6,423	68,315
1925	1,913	18,176	136	3,700	6,682	77,150
1926	6,269	68,801	1,413	35,946	3,530	38,303
1927	11,172	100,279	2,877	69,695	3,145	31,210
1928	28,223	253,353	3,573	79,742	1,550	17,651
1929	91,633	839,793	5,853	116,935	1,161	9,517
1930	70,337	800,432	9,934	200,143	1,156	9,241
1931	72,746	803,509	10,315	193,041	924	9,615
1932	61,124	644,074	8,855	153,612	304	2,848
1933	99,269	885,306	10,371	179,529	629	8,677

Source: Tyler P.M., Monograph, Sodium Sulphate, U.S. Bureau of Mines Information Circular N. 6833, p. 37.

1/ Not separately reported.

Table. - Salt cake (sodium sulphate, crude): Trend of imports for consumption, 1929-1934

Statistical period	Quantity	Value	Value per long ton	Index of imports
	Long tons			
1929	81,816	$829,793	$10.14	100.0
1930	62,799	800,432	12.74	76.8
1931	64,953	803,509	12.37	79.3
1932	54,575	644,074	11.80	66.7
1933	88,633	885,306	9.99	108.3
1934	80,090	799,141	9.98	97.9
By quarters				
1932				
First	14,163	171,995	12.14	-
Second	13,614	160,347	11.78	-
Third	9,634	111,721	11.60	-
Fourth	17,146	200,011	11.67	-
1933				
First	18,354	195,414	10.65	-
Second	24,169	233,284	9.65	-
Third	23,272	228,978	9.84	-
Fourth	22,838	227,630	9.97	-
1934				
First	22,549	232,650	10.32	-
Second	23,693	226,413	9.56	-
Third	16,656	162,151	9.74	-
Fourth	17,192	177,927	10.35	-

JUTE WEBBING (No. 37)

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SUPPLEMENTAL INFORMATION

ON

JUTE WEBBING

APRIL, 1935

Complainants' Status under the National Industrial Recovery Act

This is a report on a complaint to the President with respect to imported jute webbing, filed October 25, 1934, by the Code Authority of the Soft Fibre Manufacturing Industry, pursuant to Section 3(c) of Title I of the National Industrial Recovery Act.

The six complainant companies in this case, representing virtually 100 per cent of the domestic industry, operated under the Code of Fair Competition for the Soft Fibre Manufacturing Industry, approved April 9, 1934; prior to that date only two operated at any time under the President's Reemployment Agreement. One producer manufacturing small amounts of jute webbing to fill special orders did not join in the complaint.

The Code for the Soft Fibre Manufacturing Industry provided that the code authority should investigate the effect and inform the President of importation of competitive products into the United States.

Description of Commodity

Jute webbing is principally used in the upholstery of furniture, caskets, and automobiles. It is estimated that about 0.5 per cent of all jute manufactures consumed in the United States is jute webbing.

Imports are plain-woven fabrics with fast edges ranging in width from 2 inches to 5 inches; domestic webbings are plain-woven and twilled fabrics with fast edges, ranging in width from 1½ to 5 inches. Both imported and domestic webbings are put up in rolls from 70 to 72 linear yards, the former weighing from 5½ to 13 pounds per roll and the latter, from 4 to 14 pounds. The grades of webbing most commonly imported are 3½ inches and 4 inches wide and from 7 to 10½ pounds in weight per roll, being constructed of 6-pound to 20-pound single yarn and 6-pound to 12-pound 3-ply yarn, often woven double in the warp and sometimes in the filling. Domestic webbings produced in largest quantities are usually 3½ inches wide and from 7 to 9½ pounds in weight per roll, being constructed of 7-pound to 20-pound single yarn and from 7-pound to 18-pound 3-ply yarn which is woven single or double in the warp and filling.

Tariff Treatment

Jute webbing is dutiable at 35 per cent ad valorem under paragraph 1015 of the Tariff Act of 1930 as a fabric with fast edges, not exceeding 12 inches in width, in chief value composed of vegetable fibers other than cotton, and for use other than the manufacture of measuring tapes. It was dutiable at the same rate under the Tariff Acts of 1922 and 1913.

The Raw Material

Jute webbing is constucted from yarn manufactured in the United States of raw jute imported from India. The jute fiber of commerce is produced chiefly in the Province of Bengal, where about 3 million acres are devoted to its production, and shipped through the port of Calcutta. More jute is now retained for manufacture into burlaps, hessians, gunny bags, and other products in Calcutta and its environs than is shipped in the raw state to all other countries together. Jute is the most easily spun, cheapest, weakest, and least durable of the important textile fibers, and is used in larger quantities than all other fibers combined except cotton.

Raw jute is imported duty-free under Paragraph 1684 of the Tariff Act of 1930.

The Domestic Industry

At the congressional tariff hearings in 1929 it was said that there was a total capital investment of $808,454 in the jute webbing industry, and that 377 wage earners were employed in the production of jute webbing in 1928. According to data submitted in the complaint, an average of 185 wage earners were employed in the industry in 1929, 103 in 1933, and 83 in 1934.

The industry as a whole

Jute webbing is regularly produced in Ohio, Pennsylvania, New York, Massachusetts, and Georgia. There are five principal producers of jute webbing who have accounted for at least 95 per cent of total domestic production since 1929. There is a sixth producer whose output is much smaller than any of the others. The two largest producers account for about 63 per cent of domestic output, the remaining three each accounting for 11 to 14 per cent of the total.

The productive capacity of the jute webbing industry to some considerable extent has exceeded the domestic demand of the past few years. Two narrow fabric producers, still possessing machinery for production of jute webbing, have ceased manufacturing this product; another establishment has limited its production to special types made to order, and a fourth establishment claims to have the necessary machinery for the production of jute webbing but has never manufactured the product.

The largest producer

In view of the fact that jute webbing is constructed entirely from domestic jute yarn, and that only two of the webbing manufacturers - the largest and one of the smaller producers - spin their own yarns, it is of interest to examine the position of the largest producer in the industry.

In 1919 this company extended its operations to India where it established near Calcutta a selecting and baling plant for handling raw jute and a mill each for manufacturing cotton bagging, hessians, and sacks and bags from hessians. The selecting and baling plant is said to be the newest and most improved one in Bengal. With the extension of this company into India, all the major branches of jute manufacturing from heavy bagging to webbing and the finest yarns are integrated under a single firm. Besides, this company is the only manufacturer of jute outside India operating its own plant so as to control the grading and handling of the raw fiber.

None of the other webbing manufacturers approaches in any degree the integration of this firm; nor has any other a branch manufacturing establishment in India.

Production in the United States

In 1931 the value of jute webbing amounted to 35 per cent of the total value of all commodities produced in the plants of the members of the jute webbing industry, this ratio declining to 29 per cent in 1932 and 18 per cent in 1933. Jute webbing produced in the United States amounts to about 2.5 per cent of the total value of domestic jute manufactures. In 1933, jute webbing accounted for 3.4 per cent of the total value of all jute manufactures as compared with 2.9 per cent in 1931, 3.7 per cent in 1929, and 4.6 per cent in 1927, according to the Census of Manufactures.

The following table shows domestic production of jute webbing in quantity and value since 1919. The data on production, converted from linear yards to pounds, are shown separately.

Table 1. - Jute webbing: Domestic production for census years since 1919

Year	Quantity		Value 2/	Unit value per -	
	Linear yards	Pounds 1/		Linear yard	Pound
1919	25,417,400	2,824,15[illegible]	$1,053,170	$0.041	$0.373
1931	17,464,062	1,940,451	483,745	.028	.249
1933	47,085,030	5,231,670	1,373,910	.029	.263
1935	38,400,307	4,267,590	1,123,314	.029	.263
1927	45,863,260	5,095,918	1,354,009	.029	.266
1929	43,736,731	4,859,637	1,132,021	.026	.231
1931	23,723,590	2,624,843	467,[illegible]25	.021	.195
1933	17,878,956	1,986,551	367,626	.021	.185

Source: Census of Manufactures.
1/ Domestic production, reported in linear yards, converted to pounds on basis of 9 linear yards to the pound, or an average of 8 pounds per roll of 70 to 72 linear yards. (The average weight of jute webbing is believed to range from 7⅓ to 8½ pounds, or possibly 9 pounds.)
2/ At f.o.b. factory prices.

Table 2 shows the trend of production in linear yards, sales value, and the unit value of jute webbing since 1929. From the indices of Table 2 it may be seen that total production in quuantity declined about 59.1 per cent from 1929 to 1933, while the value of output decreased 67.2 per cent and unit values declined 19.2 per cent.

Table 2. - Jute webbing: Trend of quantity, value, and unit values of domestic production, in census years since 1929

Year	Quantity	Value	Unit Value	Quantity	Value	Unit Value
	Linear yards			1929 = 100		
1929	43,736,731	$1,132,021	$0.026	100.0	100.0	100.0
1931	23,723,590	467,[illegible]25	.021	52.0	41.7	80.8
1933	17,878,956	367,626	.021	40.9	32.8	80.8

Source: Census of Manufactures.

Table 3 shows domestic production of jute webbing since 1929 as reported by complainant manufacturers. Their output was 44.1 per cent of 1929 in 1933 and 40.7 of 1929 in the first ten months of 1934. Table 3 indicates less of a decline in domestic production than is shown in the preceding table by data obtained from the Census of Manufactures. There is no apparent seasonality in the production of jute webbing in the United States

Table 3. - Jute webbing: Domestic production as reported by complainants, 1929 to October, 1934

Period	Quantity	Indices of production
	Pounds	1929 = 100
1929	6,201,649	100.0
1931	3,810,273	61.4
1932	2,790,229	45.0
1933	2,861,224	46.1
First nine months		
1933	2,175,741	46.8
1934	1,836,243	39.5
First ten months of 1934	2,105,850	40.7
By quarters 1/		
1933		
January-March	547,809	35.3
April-June	652,131	42.1
July-September	975,801	62.9
October-December	685,483	44.2
1934		
January-March	648,291	41.8
April-June	571,464	36.9
July-September	616,489	39.8
By months - 1934	[illegible]	
January	199,071	38.5
February	207,257	40.1
March	241,963	46.8
April	223,164	43.2
May	212,276	41.1
June	136,024	26.3
July	181,993	35.2
August	198,886	38.5
September	235,610	45.6
October	269,606	52.2

Source: Complaint.
1/ Quarterly production data of two small companies prorated for 1933.

The decline of domestic production since 1929 was a consequence of the recession in automobile and furniture production, combined since 1931 with increasing imports. Automobile production in 1933 was only about 26 per cent and in 1934 roughly half of the 1929 output. Statistics reported by the industry in furniture manufacturing indicate that the recession began as early as 1927 and continued uninterrupted until the second quarter of 1935. Only a very limited degree of recovery has taken place in this industry in the last two years. In 1933 and 1934 furniture factories, on the basis of plant hours and man-hour employment, operated at roughly 30 to 35 per cent of their 1929 level with a corresponding output. According to data in the Census of Manufactures, employment in the industry in 1933 was 54.5 per cent and wages and the value of production were each 31.4 per cent of 1929. More particularly, available census data indicate that the value of upholstered furniture in 1931 was roughly 56 per cent and in 1933 roughly 28 per cent of 1929. In 1933 the value of upholstered furniture produced in each of the three leading states, New York, Illinois, and California, was roughly 61 per cent, 78 per cent, and 68 per cent, respectively, of 1929.

Exports

Although domestic exports are not separately recorded in official trade statistics, it is believed that jute webbing exports are negligible.

Imports

Roughly half of the imported jute webbing is entered at New York, and somewhat over a fifth through Massachusetts. In 1934, the Philadelphia and Virginia customs districts were the only two other areas along the Atlantic Coast through which webbing was imported. On the Pacific Coast the principal center of importation is Los Angeles, followed by Portland.

Table 4 shows imports of jute webbing since 1923, the first year in which this product was separately classified for statistical purposes.

Table 4. - Jute webbing: Imports for consumption, 1923-1935

Period	Quantity	Value	Unit value
	Pounds		
By years			
1923	77,339	$18,203	$0.2353
1925	86,242	16,593	.1924
1927	149,061	24,597	.1650
1929	537,891	98,521	.1831
1930	494,564	76,846	.1554
1931	761,037	101,071	.1328
1932	1,202,649	98,936	.0823
1933	1,912,186	160,879	.0841
1934	1,075,717	100,336	.0933
By quarters			
1932			
First	267,971	22,778	.0850
Second	287,376	23,650	.0823
Third	216,173	18,117	.0838
Fourth	431,129	34,391	.0798
1933			
First	382,602	31,276	.0817
Second	535,964	38,931	.0726
Third	514,371	45,209	.0879
Fourth	479,249	45,463	.0949
1934			
First	336,92[illegible]	33,682	.1000
Second	144,209	13,578	.0942
Third	196,925	19,296	.0980
Fourth	397,661	35,780	.0894
1935			
First	338,330	30,943	.0915

Source: Foreign Commerce and Navigation of the United States, and U.S. Tariff Commission.

The data in Table 4 show that there was a general increase from 1933 to 1933 in the quantity of imports for consumption of jute webbing, followed by a decline in 1934 of roughly 44 per cent under 1933, imports in 1934 being slightly less than in 1932, although greater than in the years previous to 1932. The unit value of imports declined roughly 60 per cent from 1933 to 1934. A sharp decrease in unit value from the previous year occurred in 1932, while at the same time the quantity of imports increased substantially.

The following table shows imports for consumption by principal countries since 1929. It will be noted that the only important sources of webbing are Belgium and British India, the former country supplying 71 per cent of all webbing imports in 1934. The quantity of imports from India has been increasing in relation to total imports since 1929. Webbing imports from Belgium since 1929 have been of greater unit value than imports from India, 11 per cent greater in 1929, 1 per cent greater in 1931, 28 per cent in 1932, 12 per cent in 1933, and 35 per cent in 1934. What competitive advantage with respect to Indian webbing may be found in the difference between the foreign values of Belgian and Indian webbing depends upon the ocean freight rates to the United States from the respective countries of shipment. Freight rates are not available to furnish the data for any determinative comparisons.

Table 5. - Jute weaving: Imports for consumption by principal countries, 1929-1934

	1929	1931	1932	1933	1934
Quantity (pounds)					
Belgium	513,344	611,776	1,081,938	1,584,125	759,947
British India	8,784	132,589	73,344	150,723	315,570
France	-	-	8,377	145,311	-
All other	15,463	16,672	38,990	33,028	200
Total	537,891	761,037	1,202,649	1,912,186	1,075,717
Value					
Belgium	$90,606	$80,891	$90,111	$135,158	$76,547
British India	1,377	17,402	4,731	11,407	23,729
France	-	-	685	11,095	-
All other	6,538	2,778	3,409	3,219	60
Total	98,521	101,071	98,936	160,879	100,336
Unit value					
Belgium	$0.176	$0.132	$0.083	$0.085	$0.101
British India	.157	.131	.065	.076	.075
France	-	-	.082	.076	-
All other	.423	.167	.087	.101	.300
Average	.183	.133	.082	.084	.093
Per cent of total quantity					
Belgium	95.5	80.4	90.0	82.8	70.6
British India	1.6	17.4	6.1	7.9	29.3
France	-	-	.7	7.6	-
All other	2.9	2.2	3.2	1.7	.1
Total	100.0	100.0	100.0	100.0	100.0

The Foreign Industry

Nothing is known of the jute webbing industries in Belgium and British India, except that they are very small segments of much larger jute spinning and weaving industries in each country.

In this connection it should be pointed out that British India, although second as an exporter of jute webbing to the United States, is this country's principal source of all imported jute manufactures, being followed in importance by the United Kingdom and Belgium, respectively. In 1933, British India was the source of 78 per cent of the value of all general imports of jute manufactures (exclusive of waste sacking and waste bagging), the United Kingdom accounting for 10 per cent, and Belgium 4 per cent. Belgium and the United Kingdom in 1933 were the two most important sources of woven jute fabrics, n.e.s., imported into the United States.

The Belgian Jute Weavers' Association, comprising 13 concerns with 2,500 looms, this spring (1935) reported improved business and the end of severe losses experienced during the past few years. Members of the Association, in consequence of plant modernization and resultant improvement of their manufactures, are widening their markets in the United States and South America for jute fabrics. In 1934, 90 percent of production by the Association's members was exported, whereas eight years ago 50 per cent was sent abroad. The Belgian manufacturers assert their chief competitor is the Indian jute industry.

Imports in Relation to Domestic Production

Table 6 shows a comparison of the trend of imports for consumption with domestic production from 1929 to 1934.

Table 6. - Jute webbing: Ratio of imports for consumption to domestic production

Period	Domestic production	Imports for consumption	Ratio of imports to production
	Pounds		Per cent
1929	6,201,649	537,891	8.7
1931	3,810,273	761,037	20.0
1932	2,790,229	1,202,649	43.1
1933	2,835,986	1,912,186	67.4
1934 (first ten months)	2,105,850	777,959	36.9
1933			
January-March	547,809	382,602	69.8
April-June	652,131	535,964	82.2
July-September	975,801	514,371	52.7
October-December	685,483	479,249	69.9
1934			
January-March	648,291	336,922	52.0
---------- Code approved April 9, 1934 ------			
April-June	571,464	144,209	25.2
July-September	616,489	196,925	31.9
October	269,606	99,903	37.1

From the data in Table 6 it may be noted that the ratio of imports to domestic production decreased from 52 per cent in the first quarter of 1934 to 25 per cent in the second quarter, after the code was approved, and rose only to 32 per cent in the third quarter after almost six months of code operation. The ratio of imports to domestic production for the first ten months of 1934 was 37 per cent as compared with 67 per cent for 1933 and 43 per cent for 1932.

Price Comparisons

Imported and domestic webbing

Wholesale prices in 1934 of foreign webbing, f.o.b. New York, ranged from 15-3/4 cents to 14-1/2 cents per pound, averaging about 17 cents per pound. Prices quoted f.o.b. Boston by importers in 1934 averaged roughly 16-1/3 cents. Wholesale prices for imported webbing on the Pacific Coast were similar to those quoted by importers at Atlantic ports. In the fall of 1934, f.o.b. mill prices of domestic jute webbing ranged from roughly $0.14 to $0.22 per pound. The average mill price of nine leading varieties of domestic webbing at the same time was $0.185. These varieties of webbing are all said to be competitive with imports.

The relationship between webbing and raw jute prices

It will be noted from the indices of Table 7 that the price of domestic webbing did not follow the same course as the trends of the unit value of imported webbing and the price of raw jute, which practically paralleled each other. During the first half of 1933, when the price of raw jute declined 64 per cent from 1929 and the unit value of webbing imports about 60 per cent, the price of domestic webbing dropped only 33 per cent. By the third quarter of 1934 the price of domestic webbing had risen to 80 per cent of its 1929 level, but the price of raw jute had only risen to about half and the unit value of imports to slightly more than half of 1929. The data in the table indicate the close relationship between the price of jute and the unit value of webbing imports, the latter, of course, bearing upon the prices of imported webbing in the United States.

The following table shows the trend of domestic production of jute webbing, weighted mill prices of domestic webbing, the unit value of imports, and the price of raw jute from 1929 to 1934.

Table 7. - Jute webbing: Indices of domestic production, weighted domestic mill prices, unit value of imports, and the price of medium grades of raw jute at New York, 1929-1934

Period	Domestic production	Weighted domestic mill prices 1/	Unit value of imports	Price of raw juts
	1929 - 100			
1929	100.0	2/ 100.0	100.0	100.0
1932	45.0	3/ 71.4	44.9	41.7
1933	45.7	4/ 71.9	45.9	45.8
1934	-	-	51.0	52.8
1934 (first eight months)	38.7	80.1	54.4	53.0
By quarters				
1933 - First	35.3	70.9	44.6	36.1
Second	42.1	66.5	39.7	45.8
Third	63.9	75.2	48.0	51.4
Fourth	44.2	75.7	51.8	48.6
1934 - First	41.8	80.1	54.6	55.6
Second	36.9	80.1	51.4	52.8
Third	39.8	5/ 80.1	53.5	50.0
Fourth	-	-	48.8	51.4
1935 - First	-	-	50.0	54.2

Source: Complaint: Foreign Commerce and Navigation of the United States: and Bureau of Labor Statistics, Wholesale Prices.

1/ Weighted for each year or period within year according to ratio of production of separate establishments to total production of five leading producers for respective year.
2/ April and October.
3/ January, April, July, and October.
4/ January, April, July, September, October, November, and December.
5/ September not included.

From the data in the foregoing table it may be seen that from 1929 to August, 1934, weighted mill prices of domestic jute webbing did not decline more than 34 per cent. In contrast, domestic production in 1932 and 1933 decreased roughly 55 per cent from 1929. In the first ten months of 1934, domestic production decreased still more, and was roughly 60 per cent less than in 1929.

The Price of Jute Yarn as a Competitive Factor.

Domestic manufacturers of webbing not making their own yarn are obliged to compete with imported webbing constructed from lower-priced jute yarn. Domestic webbing since 1929 has been produced almost exclusively from grades of domestic jute yarn and twist (2-ply yarn), which, in turn, are manufactured behind a tariff protective enough to prohibit virtually all imports of competitive yarn and twist from abroad. Little or no yarn is exported from the United States.

The jute yarn market in the United States is dominated and principally supplied by two, or possibly three, integrated producers of jute and other fiber textiles, the two largest having branch jute manufacturing establishments in India.

Yarn as a domestic manufacture

Yarn is far more important a domestic jute manufacture than webbing. In value it is the most important single manufacture of jute, accounting for roughly 45 per cent of the total value of domestic jute manufactures, as compared with the ratio of 2.5 per cent for webbing. About 85 per cent in quantity and value of all domestic yarn sold by producers is used in the manufacture of wool carpets and other floor coverings. Less than 10 per cent is purchased for further manufacture by the jute goods industry. More yarn is believed to be purchased for use in manufacturing electric cables than in weaving jute fabrics, such as webbing. The Census of Manufactures records domestic production of jute yarn "for sale" in 1933 amounting to 61,853,153 pounds valued at $6,827,370, or 95 per cent in quantity of all fiber yarns (exclusive of cotton) made for sale. There is no record of the output of jute yarn produced and used for further manufacture by the same companies.

Domestic tariff treatment of yarn.

Domestic webbings are constructed from 7-pound to 20-pound single yarn and from 7-pound to 18-pound twist or 2-ply yarn. Since the Tariff Act of 1922, jute yarns ranging in fineness from 20-pound up to but not including 10-pound have been dutiable at 4 cents per pound, and from 10-pound up to but not including 5-pound at 5½ cents per pound; unbleached and undyed jute twist (two or more yarns twisted together to form a single strand of the same size as single or roving yarn), ranging in size from 20-pound up to but not including 10-pound, have been dutiable at 5 cnnts per pound, and twist from 10-pound up to but not including 5-pound, 6½ cents per pound.

The prohibitive character of these specific duties is indicated by the fact that imports of both yarn and twist in the above classes since

1929 have been negligible. Imports since 1925, with the ad valorem equivalent duties for each year, are shown in the following two tables. It will be noted that the equivalent advalorem duty on yarns most used in making webbing - 20-pound up to 10-pound single - in 1932 amounted to 144 per cent and in 1933, to 133 per cent, and also that there were no imports of these yarns in 1934. The ad valorem equivalent for both 20-pound to 10-pound yarn and twist together in 1929 and 1931 to 1934 amounted to 65 per cent.

Table 8. Single jute yarn; Imports and equivalent ad valorem duty, 1925-1934.

Period	20-pound up to 10-pound (dutiable at 4 cents per pound): Quantity	Value	Equivalent ad valorem duty	10-pound up to 5-pound (dutiable at 5½ cents per pound): Quantity	Value	Equivalent ad valorem duty
	Pounds		Per cent	Pounds		Per cent
1925	316,708	42,562	30	308,604	$47,194	36
1927	2,311,942	261,562	35	79,518	10,303	43
1929	-	-	-	1,008	118	47
1931	-	-	-	9,793	1,146	47
1932	320	9	144	106	8	88
1933	199	6	133	7,560	808	52
1934	-	-	-	406	48	47

Source: Foreign Commerce and Navigation of the United States, and U. S. Tariff Commission.

Table 9. - Plain(*), 2-ply jute cordage, twine, and twist: Imports and equivalent ad valorem duty, 1925-1934.

Period	20-pound up to 10-pound (dutiable at 5 cents per pound): Quantity	Value	Equivalent ad valorem duty	10-pound up to 5-pound (dutiable at 6½ cents per pound): Quantity	Value	Equivalent ad valorem duty
	Pounds		Per cent	Pounds		Per cent
1925	57,593	$10,526	27	86,880	$15,168	29
1927	35,367	2,982	59	-	-	-
1929	2,710	291	47	570	151	25
1931	2,000	100	100	-	-	-
1932	6,868	528	65	106	8	88
1933	1,383	83	83	-	-	-
1934	250	34	37	11,307	1,224	60

Source: Foreign Commerce and Navigation of the United States, and U. S. Tariff Commission.

(*) Not bleached, dyed, or otherwise treated.

Foreign tariff treatment

In contrast to the foreign trade of the United States in jute yarn, Belgium and the United Kingdom are both heavy exporters of jute yarn and also import, at nominal rates of duty, considerably more jute yarn than this country. The ad valorem equivalent of the Belgian specific duty on 8-pound to 14-pound single yarn since 1929 has probably ranged from roughly 7 to 10 per cent, and the ad valorem equivalent on 8-pound to 14-pound twist from 8 to 13 per cent. Jute yarn, including twist, imported into the United Kingdom is dutiable at a general ad valorem rate of 10 per cent. Jute yarn imported into British India, both an unimportant importer and exporter of yarn, is dutiable at 25 per cent ad valorem.

Foreign and domestic yarn prices

In Table 10 are given the prices since 1929 of yarn at Dundee, Scotland, the jute-yarn center of Europe, and at domestic mills. In addition, there is shown the Dundee price to which has been added the ad valorem equivalent duty on yarn and twist of 65 per cent for the 1929-1934 period.

Table 10. - Jute yarn; Comparison of domestic prices with Dundee prices and Dundee prices plus ad valorem equivalent duty of 65 per cent, 1929 - 1934.

(Per pound)

Period	Dundee price 1/ of 14-pound (warp) carpet yarn	Dundee price of 14-pound yarn, plus 65 per cent duty	Domestic mill price of 14-pound to 16-pound No. 2 carpet yarn	Ratio of domestic price to Dundee price plus duty
				Per cent
1929	$0.1010	$0.1667	$0.1490	89.4
1930	.0823	.1358	.1380	101.6
1931	.0661	.1091	.1170	107.2
1932	.0652	.1076	.1050	97.6
1933	.0610	.1007	.1140	113.2
1934	.0569	.0939	.1230	131.1

Sources: Dundee Prices Current and Bureau of Labor Statistics, Wholesale Prices.

1/ Converted from pounds into dollars at the 1929 rate of $4.8569

It will be noted that the domestic price per pound in 1929 and 1932 was less than the Dundee price plus the duty and that in only two years, 1933 and 1934, was the domestic price more than 10 per cent greater than the Dundee price plus the duty. Considering the price of imported yarn to include necessarily the Dundee price plus the duty as well as freight, handling, and brokerage charges, it would appear that, except possibly in the years 1933 and 1934, Dundee exporters could not have profitably shipped 14-pound yarn to the United States market.

Price stability of domestic yarn

The fact that the domestic price of jute yarn has not been subject to the possible influence of competitive prices of imported jute yarns is at least a possible explanation for the stability of the price of domestic yarn in relation to the downward fluctuations in the price of raw jute since 1929. The indices of Table 11 show the trend since 1929 of wholesale prices at New York of medium grades of raw jute in relation to the mill price of No. 2, 14-pound to 16-pound domestic carpet yarn and the price at Dundee, Scotland, of 14-pound (warp) carpet yarn. (Yarn widely used in the manufacture of webbing is substantially the same as this grade of carpet yarn, with the exception that sizing is added to carpet yarn.)

Table 11. - Raw jute and jute yarn: Indices of wholesale prices of medium grades of raw jute at New York, domestic mill prices of No. 2, 14-pound to 16-pound carpet yarn, and mill prices of 14-pound (warp) carpet yarn at Dundee, Scotland.

Period	Wholesale price of medium grades of raw jute at New York	Mill price of jute carpet yarn	
		Domestic No. 2,14-pound to 16-pound	At Dundee, 14-pound (warp)
	1929 = 100		
1929	100.0	100.0	100.0
1930	69.4	92.6	81.9
1931	51.4	78.5	65.8
1932	41.7	70.5	64.8
1933	45.8	76.5	60.6
1934	52.8	82.6	56.6
By quarters			
1932 - January-March	47.2	70.5	69.9
April-June	40.3	70.5	62.7
July-September	43.1	70.5	64.4
October-December	37.5	70.5	62.3
1933 - January-March	36.1	70.5	58.5
April-June	45.8	71.8	61.5
July-September	51.4	80.5	63.4
October-December	48.6	82.6	59.2
1934 - January-March	55.6	82.6	59.2
April-June	52.8	82.6	55.7
July-September	50.0	82.6	56.6
October-December	51.4	82.6	56.6
By months			
1935 - January	55.6	82.6	58.5
February	55.6	82.6	59.2

Sources: Bureau of Labor Statistics, Wholesale Prices, and Dundee Prices Current (weekly), Dundee, Scotland.

From the three price indices in the above table, it will be noted that in the first quarter of 1933, when the price of raw jute fell to 36 from its 1929 level of 100, - the lowest point for the entire 1929-1934 period, - the mill price of domestic yarn declined only 71. At the same time the price of yarn (in pence) at Dundee fell to 59 per cent of 1929. Since the first quarter of 1933 the price of domestic yarn has risen to 83, while the Dundee price has generally continued to decline, notwithstanding the fact that the pound was devaluated a year and one-half earlier than the dollar.

Manufacturer's margin

The stability of the price of domestic jute yarn, despite the greater general decline of prices during the depression, allowed the manufactureers to increase the margin between the cost of the raw fiber and the selling price of the finished yarn. Thus, through an increased manufacturer's margin, the yarn producers have, in effect, raised the price of their services.

The data of Table 12 indicate that in every year shown, with exception of 1932, the manufacturer's margin in the production of jute yarn was greater than in 1929, being 5.2 per cent greater in 1933 and 10.4 per cent greater in 1934.

Table 12. - Raw jute and jute yarn: Prices of raw jute and carpet yarn, and the manufacturer's margin, 1929 to March, 1935.

Period	Wholesale price of medium grades of raw jute at New York	Domestic mill price, No.2 14-pound to 16-pound carpet yarn	Manufacturer's margin	
			Amount	Indices of amount 1929= 100
1929	$0.072	$0.149	$0.077	100.0
1930	.050	.138	.088	114.3
1931	.037	.117	.080	103.9
1932	.030	.105	.075	97.4
1933	.033	.114	.081	105.2
1934	.038	.125	.085	110.4
By quarters				
1932				
January-March	.034	.105	.071	92.2
April-June	.029	.105	.076	98.7
July-September	.031	.105	.074	96.1
October-December	.027	.105	.078	101.3
1933				
January-March	.026	.105	.079	102.6
April-June	.033	.107	.074	96.1
July-September	.037	.120	.083	107.8
October-December	.035	.123	.088	111.7
1934				
January-March	.040	.123	.083	107.8
April-June	.038	.123	.085	110.4
July-September	.036	.123	.087	113.0
October-December	.037	.123	.086	111.7
1935				
January-March	.039	.123	.084	109.8

Source: Bureau of Labor Statistics, Wholesale Prices.

The Effect of Dollar Depreciation

The depreciation of the dollar in terms of belgas and rupees during the period from the second quarter of 1933 to the second and third quarters of 1934 apparently was a factor in the decreasing volume of imports from Belgium, but was without apparent effect in decreasing the volume of imports from India, as may be seen from the data of Table 13. This table gives the indices both of the respective exchange rates and of the unit values of imports, along with the amount in pounds of imports from each country, from 1932 to the first quarter of 1935.

Table 13. - Exchange and webbing imports: Indices of belga-and rupee-dollar exchange and of the unit values of imports, along with the quantity of imports, 1932 to March, 1935.

Period	Belga-dollar exchange	Imports from Belgium		Rupee-dollar exchange	Imports from British India	
		Unit value	Quantity		Unit value	Quantity
	1932 =	100	Pounds	1932 =	100	Pounds
1932	100	100	1,081,938	100	100	73,344
1933	129	102	1,584,125	121	117	150,722
1934	167	121	759,947	144	111	315,570
By quarters						
1933						
January-March	100	98	331,247	97	104	21,750
April-June	115	87	430,301	111	108	41,762
July-September	142	108	441,981	131	117	8,700
October-December	155	117	380,596	141	126	78,510
1934						
January-March	163	126	239,417	144	136	97,305
April-June	168	132	101,209	145	89	43,000
July-September	170	131	170,980	144	120	25,945
October-December	168	111	248,341	141	111	149,320
1935						
January-March	166	113	300,145	139	112	38,175

Source: Federal Reserve Bulletin, and U.S. Tariff Commission.

In the foregoing table it may be noted that the value of the belga in terms of dollars rose 67 points from 1932 to 1934, and that the unit value of imports increased 21 points. From 1933 to 1934 the quantity of webbing imports from Belgium declined about 50 per cent. From 1932 to 1934 the rupee rose 44 points in terms of dollars, while the unit value rose only 11 points. From 1933 to 1934 the quantity of webbing imported from British India increased 100 per cent.

The Effect of the National Recovery Program

Labor provisions of the code

A basic minimum wage rate of 32½ cents, regardless of whether employees are compensated on a time-rate or piece-work basis, was established by the Code for the Soft Fibre Manufacturing Industry. A basic minimum weekly wage, however, was not provided. A basic 40-hour week was established by the code, but there was no limitation on the number of hours in a work day.

Hours and wages

The trend of weekly wages and hourly rates of pay in the industry since 1929 may be seen from the data in Table 14.

Table 14. - Jute webbing: Trend of average weekly and hourly wages in the industry since 1929.

Period	Average weekly wage		Average hourly rate	
	Amount	Index	Amount	Index
		1929= 100		1929=100
1929	$21.04	100.0	$0.455	100.0
1932	8.47	40.3	.379	83.3
1933	10.48	49.8	.346	76.0
1934(first nine months)	9.98	47.4	.372	81.8
1932				
January	11.66	55.4	.361	79.3
April	7.48	35.6	.441	96.9
July	4.62	22.0	.422	92.7
October	6.98	33.2	.367	80.7
1933				
January	7.34	34.9	.355	78.0
April	5.80	27.6	.281	61.8
July	11.88	56.5	.317	69.7
October	15.83	75.2	.400	87.9
1934				
January	11.00	52.3	.398	87.5
----------Code approved April 9, 1934----------				
April, July, September	9.67	46.0	.367	80.7
April	10.24	48.7	.375	82.4
July	9.66	46.0	.362	79.6
September	1/9.48	45.1	1/.366	80.4

Source: Complaint.
1/ Includes data of one company for payroll period ended August 18, 1934, instead of for September, because September data are unacceptable.

From the data in the foregoing table it may be seen that wage earners in the jute webbing industry in 1929 were paid an average hourly rate of about $0.46. The average hourly rate was about $0.38 in 1932, $0.35 in 1933, and $0.37 in the first nine months of 1934. During 1933 the average hourly rate ranged from approximately $0.28 (April) to $0.40 (October). After approval of the code on April 9, 1934, the average hourly rate through September, 1934, was roughly $0.37, as compared with the average hourly rate of about $0.40 in January, 1934. (According to data submitted in the complaint, at no time from the date of the approval of the code to September, 1934, was the hourly wage paid by any single establishment less than $0.34.)

In the above table it may be seen that the average weekly wage was about $10.48 in 1933 and $9.98 in the first nine months of 1934. In January, 1934, just prior to the approval of the code, the weekly wage was about $11 and $9.67 in the period from April to September, after the approval of the code.

Table 15 shows indices of employment, payroll, and wages for the year 1933 and for the one-week period ended the middle of January, 1934, before approval of the code, and similar periods in April, July, and September, after approval of the code.

Table 15. - Jute webbing; Indices of employment, payroll, and wages, 1933 and 1934.

Period (week ended 15th of month)	Number of employees	Hours per worker per week	Man-hours per payroll period (1933 1/ = 100)	Total weekly payroll	Average Weekly wage	Average hourly wage
1934						
January	59.34	91.54	54.11	62.07	104.96	115.03
	------Code Approved April 9, 1934------					
April	86.81	90.22	78.09	84.54	97.71	108.38
July	87.91	88.24	77.47	80.77	92.18	104.34
September 2/	89.01	88.90	76.10	80.25	90.46	105.78

1/ Payroll periods in January, April, July, and October.
2/ Includes data of one company for the payroll period ended August 18, 1934, instead of in September, because September data are unacceptable.

The indices of the foregoing table show that the number of workers employed, hours of work, and weekly wages declined in 1934, after approval of the code, as compared with 1933. There was, however, an increase in the index of hourly wages in the post-code period. As compared with the period in January, 1934, before approval of the code, the indices for the later payroll periods in April, July, and September, show only an increase in the number employed, with declines in the hours per worker and the weekly and hourly rates of pay.

Production and sales cost

Table 16 shows costs of producing and selling 1,000 pounds of jute webbing for four companies in the first half of 1933 and generally for 1934 and the percentage distribution of costs in the two periods. The costs were submitted in the complaint in consolidated form without separate data for each company, thus precluding a determinative analysis of the various factors which should be considered before any valid conclusions can be drawn as to costs in pre-and post-code periods.

Table 16. - Jute webbing: Producing and selling costs for four companies 1/ in 1933 and 1934, and percentage distribution of cost items.

Item of cost	Cost per 1,000 pounds		Per cent increase (+) or decrease (-) over 1933	Percentage distribution of separate costs		Per cent increase (+) or decrease (-) over 1933
	1933 2/	1934 3/		1933 2/	1934 3/	
Material	$79.59	$92.53	+ 16.2	56.9	56.3	-0.6
Labor	20.76	28.49	+ 37.2	14.8	17.3	+2.5
Factory expense	14.10	15.67	+ 11.1	10.1	9.5	- .6
Depreciation	4.66	4.37	- 6.2	3.3	2.7	- .7
General, administrative, and selling expense	20.83	23.29	+ 11.8	14.9	14.2	- .7
Total	139.93	164.35	+ 17.5	100.0	100.0	-

Source: Complaint

1/ Representing about 50 per cent of domestic production.
2/ Based on operations for the first half of 1933.
3/ Based on operations for various periods in 1934.

The cost of material was 16 per cent greater in 1934 than in 1933, an increase greater than the known general increase in the cost of yarn, the chief material used in weaving jute webbing. The mill price of No. 2, 14-pound to 16-pound carpet yarn rose from $0.114 in 1933 to $0.123 in 1934, an increase of 0.9 of a cent, or 7.9 per cent.

OFFICE OF THE NATIONAL RECOVERY ADMINISTRATION

THE DIVISION OF REVIEW

THE WORK OF THE DIVISION OF REVIEW

Executive Order No. 7075, dated June 15, 1935, established the Division of Review of the National Recovery Administration. The pertinent part of the Executive Order reads thus:

> The Division of Review shall assemble, analyze, and report upon the statistical information and records of experience of the operations of the various trades and industries heretofore subject to codes of fair competition, shall study the effects of such codes upon trade, industrial and labor conditions in general, and other related matters, shall make available for the protection and promotion of the public interest an adequate review of the effects of the Administration of Title I of the National Industrial Recovery Act, and the principles and policies put into effect thereunder, and shall otherwise aid the President in carrying out his functions under the said Title. I hereby appoint Leon C. Marshall, Director of the Division of Review.

The study sections set up in the Division of Review covered these areas: industry studies, foreign trade studies, labor studies, trade practice studies, statistical studies, legal studies, administration studies, miscellaneous studies, and the writing of code histories. The materials which were produced by these sections are indicated below.

Except for the Code Histories, all items mentioned below are scheduled to be in mimeographed form by April 1, 1936.

THE CODE HISTORIES

The Code Histories are documented accounts of the formation and administration of the codes. They contain the definition of the industry and the principal products thereof; the classes of members in the industry; the history of code formation including an account of the sponsoring organizations, the conferences, negotiations and hearings which were held, and the activities in connection with obtaining approval of the code; the history of the administration of the code, covering the organization and operation of the code authority, the difficulties encountered in administration, the extent of compliance or non-compliance, and the general success or lack of success of the code; and an analysis of the operation of code provisions dealing with wages, hours, trade practices, and other provisions. These and other matters are canvassed not only in terms of the materials to be found in the files, but also in terms of the experiences of the deputies and others concerned with code formation and administration.

The Code Histories, (including histories of certain NRA units or agencies) are not mimeographed. They are to be turned over to the Department of Commerce in typewritten form. All told, approximately eight hundred and fifty (850) histories will be completed. This number includes all of the approved codes and some of the unapproved codes. (In Work Materials No. 18, Contents of Code Histories, will be found the outline which governed the preparation of Code Histories.)

(In the case of all approved codes and also in the case of some codes not carried to final approval, there are in NRA files further materials on industries. Particularly worthy of mention are the Volumes I, II and III which constitute the material officially submitted to the President in support of the recommendation for approval of each code. These volumes

set forth the origination of the codes, the sponsoring group, the evidence advanced to support the proposal, the report of the Division of Research and Planning on the industry, the recommendations of the various Advisory Boards, certain types of official correspondence, the transcript of the formal hearing, and other pertinent matter. There is also much official information relating to amendments, interpretations, exemptions, and other rulings. The materials mentioned in this paragraph were of course not a part of the work of the Division of Review.)

THE WORK MATERIALS SERIES

In the work of the Division of Review a considerable number of studies and compilations of data (other than those noted below in the Evidence Studies Series and the Statistical Material Series) have been made. These are listed below, grouped according to the character of the material. (In Work Materials No. 17, Tentative Outlines and Summaries of Studies in Process, the materials are fully described).

Industry Studies

Automobile Industry, An Economic Survey of
Bituminous Coal Industry under Free Competition and Code Regulation, Economic Survey of
Electrical Manufacturing Industry, The
Fertilizer Industry, The
Fishery Industry and the Fishery Codes
Fishermen and Fishing Craft, Earnings of
Foreign Trade under the National Industrial Recovery Act
- Part A - Competitive Position of the United States in International Trade 1927-29 through 1934.
- Part B - Section 3 (e) of NIRA and its administration.
- Part C - Imports and Importing under NRA Codes.
- Part D - Exports and Exporting under NRA Codes.

Forest Products Industries, Foreign Trade Study of the
Iron and Steel Industry, The
Knitting Industries, The
Leather and Shoe Industries, The
Lumber and Timber Products Industry, Economic Problems of the
Men's Clothing Industry, The
Millinery Industry, The
Motion Picture Industry, The
Migration of Industry, The: The Shift of Twenty-Five Needle Trades From New York State, 1926 to 1934
National Labor Income by Months, 1929-35
Paper Industry, The
Production, Prices, Employment and Payrolls in Industry, Agriculture and Railway Transportation, January 1923, to date
Retail Trades Study, The
Rubber Industry Study, The
Textile Industry in the United Kingdom, France, Germany, Italy, and Japan
Textile Yarns and Fabrics
Tobacco Industry, The
Wholesale Trades Study, The
Women's Neckwear and Scarf Industry, Financial and Labor Data on

Women's Apparel Industry, Some Aspects of the

Trade Practice Studies

Commodities, Information Concerning: A Study of NRA and Related Experiences in Control
Distribution, Manufacturers' Control of: Trade Practice Provisions in Selected NRA Codes
Distributive Relations in the Asbestos Industry
Design Piracy: The Problem and Its Treatment Under NRA Codes
Electrical Mfg. Industry: Price Filing Study
Fertilizer Industry: Price Filing Study
Geographical Price Relations Under Codes of Fair Competition, Control of
Minimum Price Regulation Under Codes of Fair Competition
Multiple Basing Point System in the Lime Industry: Operation of the
Price Control in the Coffee Industry
Price Filing Under NRA Codes
Production Control in the Ice Industry
Production Control, Case Studies in
Resale Price Maintenance Legislation in the United States
Retail Price Cutting, Restriction of, with special Emphasis on The Drug Industry.
Trade Practice Rules of The Federal Trade Commission (1914-1936): A classification for comparision with Trade Practice Provisions of NRA Codes.

Labor Studies

Cap and Cloth Hat Industry, Commission Report on Wage Differentials in
Earnings in Selected Manufacturing Industries, by States, 1933-35
Employment, Payrolls, Hours, and Wages in 115 Selected Code Industries 1933-35
Fur Manufacturing, Commission Report on Wages and Hours in
Hours and Wages in American Industry
Labor Program Under the National Industrial Recovery Act, The
  Part A. Introduction
  Part B. Control of Hours and Reemployment
  Part C. Control of Wages
  Part D. Control of Other Conditions of Employment
  Part E. Section 7(a) of the Recovery Act
Materials in the Field of Industrial Relations
PRA Census of Employment, June, October, 1933
Puerto Rico Needlework, Homeworkers Survey

Administrative Studies

Administrative and Legal Aspects of Stays, Exemptions and Exceptions, Code Amendments, Conditional Orders of Approval
Administrative Interpretations of NRA Codes
Administrative Law and Procedure under the NIRA
Agreements Under Sections 4(a) and 7(b) of the NIRA
Approved Codes in Industry Groups, Classification of
Basic Code, the -- (Administrative Order X-61)
Code Authorities and Their part in the Administration of the NIRA
  Part A. Introduction
  Part B. Nature, Composition and Organization of Code Authorities

Part C. Activities of the Code Authorities
Part D. Code Authority Finances
Part E. Summary and Evaluation
Code Compliance Activities of the NRA
Code Making Program of the NRA in the Territories, The
Code Provisions and Related Subjects, Policy Statements Concerning
Content of NIRA Administrative Legislation
Part A. Executive and Administrative Orders
Part B. Labor Provisions in the Codes
Part C. Trade Practice Provisions in the Codes
Part D. Administrative Provisions in the Codes
Part E. Agreements under Sections 4(a) and 7(b)
Part F. A Type Case: The Cotton Textile Code
Labels Under NRA, A Study of
Model Code and Model Provisions for Codes, Development of
National Recovery Administration, The: A Review of its Organization and Activities
NRA Insignia
President's Reemployment Agreement, The
President's Reemployment Agreement, Substitutions in Connection with the
Prison Labor Problem under NRA and the Prison Compact, The
Problems of Administration in the Overlapping of Code Definitions of Industries and Trades, Multiple Code Coverage, Classifying Individual Members of Industries and Trades
Relationship of NRA to Government Contracts and Contracts Involving the Use of Government Funds
Relationship of NRA with States and Municipalities
Sheltered Workshops Under NRA
Uncodified Industries: A Study of Factors Limiting the Code Making Program

Legal Studies

Anti-Trust Laws and Unfair Competition
Collective Bargaining Agreements, the Right of Individual Employees to Enforce
Commerce Clause, Federal Regulation of the Employer-Employee Relationship Under the
Delegation of Power, Certain Phases of the Principle of, with Reference to Federal Industrial Regulatory Legislation
Enforcement, Extra-Judicial Methods of
Federal Regulation through the Joint Employment of the Power of Taxation and the Spending Power
Government Contract Provisions as a Means of Establishing Proper Economic Standards, Legal Memorandum on Possibility of
Industrial Relations in Australia, Regulation of
Intrastate Activities Which so Affect Interstate Commerce as to Bring them Under the Commerce Clause, Cases on
Legislative Possibilities of the State Constitutions
Post Office and Post Road Power — Can it be Used as a Means of Federal Industrial Regulation?
State Recovery Legislation in Aid of Federal Recovery Legislation History and Analysis
Tariff Rates to Secure Proper Standards of Wages and Hours, the Possibility of Variation in
Trade Practices and the Anti-Trust Laws
Treaty Making Power of the United States
War Power, Can it be Used as a Means of Federal Regulation of Child Labor?

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THE EVIDENCE STUDIES SERIES

The Evidence Studies were originally undertaken to gather material for pending court cases. After the Schechter decision the project was continued in order to assemble data for use in connection with the studies of the Division of Review. The data are particularly concerned with the nature, size and operations of the industry; and with the relation of the industry to interstate commerce. The industries covered by the Evidence Studies account for more than one-half of the total number of workers under codes. The list of those studies follows:

Automobile Manufacturing Industry
Automotive Parts and Equipment Industry
Baking Industry
Boot and Shoe Manufacturing Industry
Bottled Soft Drink Industry
Builders' Supplies Industry
Canning Industry
Chemical Manufacturing Industry
Cigar Manufacturing Industry
Coat and Suit Industry
Construction Industry
Cotton Garment Industry
Dress Manufacturing Industry
Electrical Contracting Industry
Electrical Manufacturing Industry
Fabricated Metal Products Mfg. and Metal Finishing and Metal Coating Industry
Fishery Industry
Furniture Manufacturing Industry
General Contractors Industry
Graphic Arts Industry
Gray Iron Foundry Industry
Hosiery Industry
Infant's and Children's Wear Industry
Iron and Steel Industry
Leather Industry
Lumber and Timber Products Industry
Mason Contractors Industry
Men's Clothing Industry
Motion Picture Industry
Motor Vehicle Retailing Trade
Needlework Industry of Puerto Rico
Painting and Paperhanging Industry
Photo Engraving Industry
Plumbing Contracting Industry
Retail Lumber Industry
Retail Trade Industry
Retail Tire and Battery Trade Industry
Rubber Manufacturing Industry
Rubber Tire Manufacturing Industry
Shipbuilding Industry
Silk Textile Industry
Structural Clay Products Industry
Throwing Industry
Trucking Industry
Waste Materials Industry
Wholesale and Retail Food Industry
Wholesale Fresh Fruit and Vegetable Industry
Wool Textile Industry

THE STATISTICAL MATERIALS SERIES

This series is supplementary to the Evidence Studies Series. The reports include data on establishments, firms, employment, payrolls, wages, hours, production capacities, shipments, sales, consumption, stocks, prices, material costs, failures, exports and imports. They also include notes on the principal qualifications that should be observed in using the data, the technical methods employed, and the applicability of the material to the study of the industries concerned. The following numbers appear in the series:
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Asphalt Shingle and Roofing Industry
Business Furniture
Candy Manufacturing Industry
Carpet and Rug Industry
Cement Industry
Cleaning and Dyeing Trade
Coffee Industry
Copper and Brass Mill Products Industry
Cotton Textile Industry
Electrical Manufacturing Industry
Fertilizer Industry
Funeral Supply Industry
Glass Container Industry
Ice Manufacturing Industry
Knitted Outerwear Industry
Paint, Varnish, and Lacquer, Mfg. Industry
Plumbing Fixtures Industry
Rayon and Synthetic Yarn Producing Industry
Salt Producing Industry

THE COVERAGE

The original, and approved, plan of the Division of Review contemplated resources sufficient (a) to prepare some 1200 histories of codes and NRA units or agencies, (b) to consolidate and index the NRA files containing some 40,000,000 pieces, (c) to engage in extensive field work, (d) to secure much aid from established statistical agencies of government, (e) to assemble a considerable number of experts in various fields, (f) to conduct approximately 25% more studies than are listed above, and (g) to prepare a comprehensive summary report.

Because of reductions made in personnel and in use of outside experts, limitation of access to field work and research agencies, and lack of jurisdiction over files, the projected plan was necessarily curtailed. The most serious curtailments were the omission of the comprehensive summary report; the dropping of certain studies and the reduction in the coverage of other studies; and the abandonment of the consolidation and indexing of the files. Fortunately, there is reason to hope that the files may yet be cared for under other auspices.

Notwithstanding these limitations, if the files are ultimately consolidated and indexed the exploration of the NRA materials will have been sufficient to make them accessible and highly useful. They constitute the largest and richest single body of information concerning the problems and operations of industry ever assembled in any nation.

L. C. Marshall,
Director, Division of Review.

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